



Industria y Comercio
SUPERINTENDENCIA

...SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
INVENTARIO

PCT

D. Alix

SOLICITUD

PATENTE DE INVENCION

-PCT

03-21128

21. EXPEDIENTE N°

54. TÍTULO *Método de anticoncepción y forma de administración del mismo*

51. CLASIFICACIÓN INTERNACIONAL *A61K 31/00* *AGIKAS/06*

71. SOLICITANTE *Schering Aktiengesellschaft*

DOMICILIO *Berlin, Alemania*

74. APODERADO *Gustavo Hollmann Prestepo*

22. BOGOTÁ, D. C. *12 Marzo de 2003*
2070-3

71/87

QF

EXAMEN TÉCNICO DE FONDO			
Nº Radicación	03-21128	Fecha de presentación	12/03/2003
Nº Prioridad	DE 10045380	Fecha de Prioridad	14/09/2000

Palabras clave	
----------------	--

CLASIFICACIONES INTERNACIONALES DE BÚSQUEDA

DOCUMENTOS CORRESPONDIENTES EN OTROS PAÍSES			
CA2420292	US2004219174	MXPA03002070	EP1317286
EE200300103		DE10045380	CN1455681
Patente Original	WO0222110		

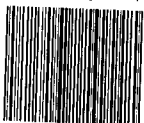
BASES DE DATOS CONSULTADAS

INFORMES DE EXÁMENES EN OTRAS OFICINAS		
Oficina	Fecha	Reivindicaciones
Europea	27/12/2002	21 - 37
ANTERIORIDADES ENCONTRADAS		
Documento	Relevancia	Reivindicaciones afectadas
LITERATURA NO PATENTES		
Documento no Patentes	Relevancia	Reiv. afectadas
Observaciones		
Fecha del examen	Art. 45: 07/03/2008	

PETITORIO



Industria y Comercio
SUPERINTENDENCIA



3 021128 00

SUPERINDUSTRIA Y COMERCIO

Radicación : 03021128 00000000

Folios: 57

Fecha (AMD): 2003-03-12 17:01:06

Trámite : 011 PCT-PATENT 379 FASE NACI 411 PRESENTAL

Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

FORMULARIO ÚNICO DE SOLICITUD DE PATENTE PCT ENTRADA EN FASE NACIONAL

①

SOLICITUD DE :



Patente de Invención.



Patente de Modelo de Utilidad.



Capítulo I.



Capítulo II.

②

SOLICITANTE
(71)

Nombre: **SCHERING AKTIENGESellschaft**

Dirección: **Müllerstrasse 178
13353 Berlin, Alemania**

Nacionalidad o Domicilio: **Berlin, Alemania**
Lugar de Constitución: **Alemania**

Teléfono:

Fax:

E-mail:

IDENTIFICACIÓN

C.C.



NIT



C.E.



Otro



Cual

Número

③

REPRESENTANTE
O APODERADO

Nombre: **GUSTAVO HOLLMANN RESTREPO**

Dirección: **Cra. 11A No. 94-76-Of. 308**

Teléfono: **6161948** Fax: **6163976**

E-mail:

IDENTIFICACIÓN

C.C.



NIT



C.E.



Otro



Cual

Número **2.878.023** TP **5903**

④

INVENTOR (ES)
(72)

Nombre: **Hermann Kulmann**

Dirección: **Dachsbau 78 A**

Nacionalidad o Domicilio **13305 Berlin, Alemania**

⑤ PCT (86)

Solicitud Internacional No. **PCT/EP01/10207**

Fecha **Septiembre 5, 2001**

Publicación Internacional No. **WO 02/22110 A2**

Fecha **Marzo 21 de 2002**

Publicación Internacional No. **WO 02/022110 A3**

Fecha **Marzo 21 de 2002**

⑥

Título (54) **"METODO DE ANTICONCEPCION Y FORMA DE ADMINISTRACION DEL MISMO".**

⑦

Clasificación Internacional (51) **A61K 31/00**

⑧

Prioridad

(33) Pais de Origen

(32) Fecha

(31) Número de Solicitud

SI ☒

NO ☐

Alemania

Septiembre 14, 2000

100 45 380.5

⑨

Comprobante de pago No. **17,964**

Fecha **Marzo 11/2003**

Instrucciones para el diligenciamiento del presente formulario, ver reverso de esta página.

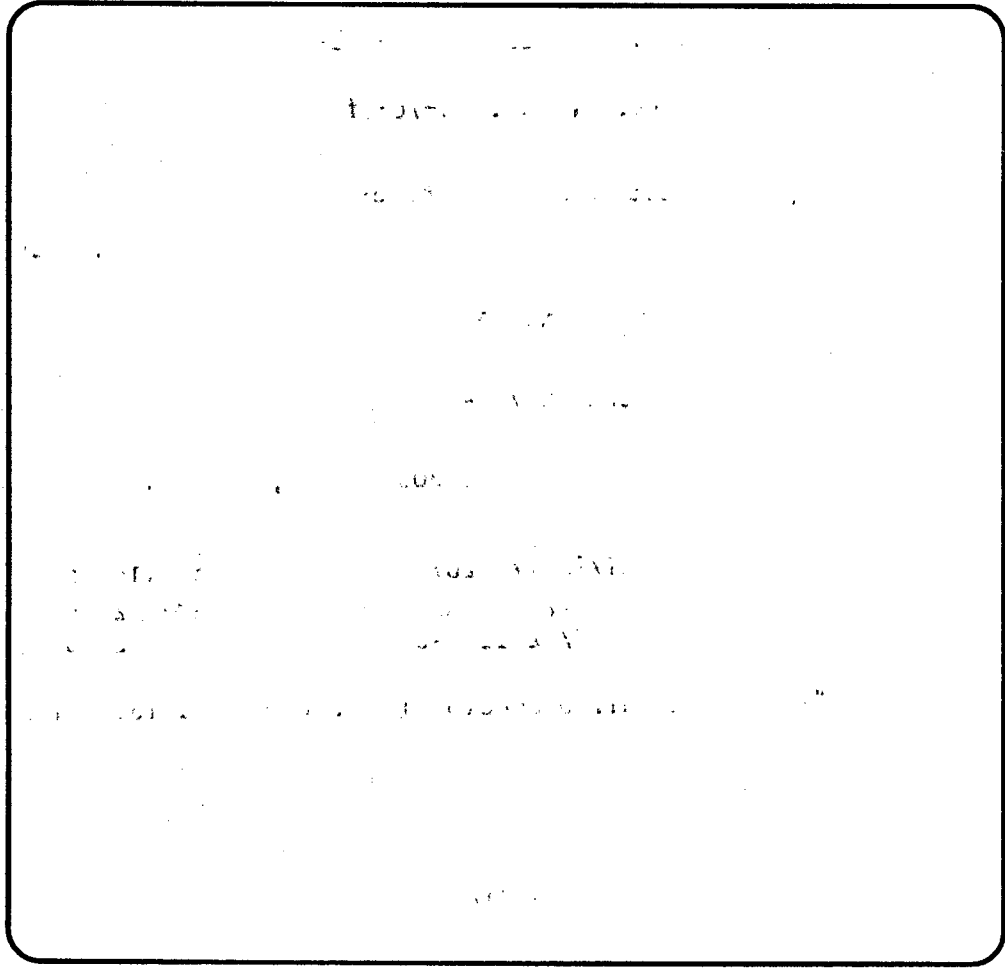
10

ANEXOS

- ☒ Comprobante de pago de la tasa de presentación de la solicitud.
- ☒ Documento que acredite la existencia y representación legal cuando el solicitante sea persona jurídica.
- ☒ Poderes, si fuere el caso. **Se encuentra protocolizado bajo el No. 605.**
- ☐ Documento de cesión del inventor al solicitante o a su causante.
- ☐ Declaraciones
- ☒ Copia de la solicitud internacional. (Resumen, descripción, reivindicaciones, dibujos)
- ☒ Traducción de la solicitud internacional al castellano. (Resumen, descripción, reivindicaciones, dibujos)
- ☒ Copia del examen preliminar internacional efectuado por la Autoridad Internacional de Examen Preliminar (IPEA).
- ☐ Traducción del examen preliminar internacional efectuado por la IPEA.
- ☐ De ser el caso, copia del contrato de acceso.
- ☐ De ser el caso, documento que acredite la licencia o autorización de uso de conocimientos tradicionales de las comunidades indígenas.
- ☐ De ser el caso, certificado de depósito del material biológico
- ☐ Arte final 12x12.
- ☐ De ser el caso, información sobre otras solicitudes de patente o títulos obtenidos en el extranjero por el mismo titular o su causante, relacionadas parcial o totalmente con la invención de esta solicitud.
- ☐ De ser el caso, modificaciones efectuadas a la solicitud internacional.
- ☒ Otros **Reporte de búsqueda internacional.**

11

FIGURA CARACTERÍSTICA:



12

Solicito la concesión de la patente,

NOMBRE: GUSTAVO HOLLMANN RESTREPO

FIRMA: 

C.C. 2.878.023 B/ta.T.P. 5903

Instrucciones para la presentación de los anexos, ver reverso de esta página.



Industria y Comercio

SUPERINTENDENCIA

Superindustria y Comercio
Radicacion : 03021128 00000000 folios: 57
Fecha (AMD): 2003-03-12 17:01:06
Tramite : 011 PCI-PATENT 379 FASE NACI 411 PRESENTAC
Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

RECIBO OFICIAL DE CAJA : 03 - 17,964
FECHA : MARZO 11 DE 2003

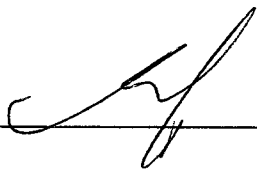
***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PGO	Vr. PAGO
GUSTAVO HOLLMAN	CONSIGNACION	BANCO POPULAR	050-00110-6	64B2712	11/03/2003	9,290,000.00

***** CONCEPTO *****

CANT.	RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005-01-01	SOLICITUDES	
1		TRAMITES DE SOL. DE PATENTE DE IN	400,000.00
		TOTAL :	\$ 400,000.00

SON: CUATROCIENTOS MIL PESOS

RESPONSABLE : 

RECIBO DE CAJA APLICADO AL EXPEDIENTE No. _____

Carrera 13 No. 27-00 Pisos 5, 7 y 10
Conmutador 382 0840
Fax 350 5220
E-mail: info@sic.gov.co
www.sic.gov.co
Bogotá, D.C., Colombia

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 March 2002 (21.03.2002)

PCT

(10) International Publication Number
WO 02/22110 A2

(51) International Patent Classification⁷: **A61K 31/00**

(21) International Application Number: **PCT/EP01/10207**

(22) International Filing Date:
5 September 2001 (05.09.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
100 45 380.5 14 September 2000 (14.09.2000) DE

(71) Applicant (for all designated States except US): **SCHERING AKTIENGESELLSCHAFT** [DE/DE]; Müllerstrasse 178, 13342 Berlin (DE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **KULMANN, Hermann** [DE/DE]; Dachsbau 78 A, 13503 Berlin (DE).

(74) Agent: **GODDAR, Heinz**; Boehmert & Boehmert, Hollerallee 32, 28209 Bremen (DE).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

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

(54) Title: CONTRACEPTION PROCESS AND ADMINISTRATION FORM FOR THE SAME

(57) Abstract: Process for hormonal contraception, in which in a plurality of substantially time-unlimited, linked taking periods and optionally having a sequence lasting several years and which in each case comprise at least one taking cycle with a duration-constant taking phase lasting several days within the particular taking period and a taking pause lasting several days, in which taking phase or phases per day administration takes place of a daily unit with at least one contraceptively acting hormone component, such as estrogen and/or gestagen, and in the taking pause or pauses administration takes place either of placebos free from any hormone component or the particular taking pause remains entirely administration-free and the duration of the taking phase or phases of at least the final taking period last at least 22 days, characterized in that the duration of the taking phase or phases in any taking period preceding a following taking period is shorter than in each case following taking period, as well as administration form for hormonal contraception and in particular for the performance thereof.

WO 02/22110 A2

CONTRACEPTION PROCESS AND ADMINISTRATION FORM FOR THE SAME

Process for hormonal contraception, in which in a plurality of substantially time-unlimited, linked taking periods and optionally having a sequence lasting several years and which in each case comprise at least one taking cycle with a duration-constant taking phase lasting several days within the particular taking period and a taking pause lasting several days, in which taking phase or phases per day administration takes place of a daily unit with at least one contraceptively acting hormone component, such as estrogen and/or gestagen, and in the taking pause or pauses administration takes place either of placebos free from any hormone component or the particular taking pause remains entirely administration-free and the duration of the taking phase or phases of at least the final taking period lasts at least 22 days, as well as an administration form for hormonal contraception, particularly for performing the aforementioned process, with a plurality of packaging units, which in each case have at least one set of daily units to be administered within a taking cycle of a taking period, within which the duration of the taking phases is constant and comprising in each case one taking phase and a neighbouring taking pause and which in each case comprise at least one number of hormone daily units corresponding to the duration of the taking phase or phases, in each case with a content of at least one contraceptively acting hormone component, such as estrogen and/or gestagen, as well as a number of placebos corresponding to the duration of the taking pause or pauses and the duration of the taking phase or phases of at least the last of the taking periods following the first taking period amounts to at least 22 days.

Oral contraceptives are typically taken for a 21 day period. This taking phase generally follows a 7 day taking pause leading to menstruation (withdrawal bleeding). This taking regimen was developed in around 1960 because it largely corresponds to the natural cycle, but there is no medical reason for this.

Over the past 20 years tests have repeatedly been carried out with longer taking pauses demonstrating that the number of withdrawal bleedings can be reduced. In two long term studies described by N.B. Loudon et al in an article entitled "Acceptability of an oral contraceptive that reduces the frequency of menstruation: the tri-cycle pill regimen", British Medical Journal, 1977, 2, pp 487-490 or an article by A.C. Cachrimanidou et al in an article entitled "Long-interval treatment regimen with a desogestrel-containing oral contraceptive", published in Contraception 1993: 48, pp 205-216, testing took place on the one hand of a regimen involving taking for 84 days, followed by a 6 day pause and on the other taking for 63 days followed by a 7 day pause. It was established during these tests that contraceptive safety and reliability are not reduced. It was even assumed that taking errors such as e.g. forgotten tablets have a smaller influence than with conventional regimens. However, it was simultaneously established that the number of undesired vaginal spotting and breakthrough bleeding effects was increased by the extended taking phase. This also applies for short-term studies, such as e.g. that by W.S. de Voogd in an article entitled "Postponement of withdrawal bleeding with a monophasic oral contraceptive containing desogestrel and ethinylestradiol", published in Contraception 44, no. 2, August 1991, pp 107-112. The frequency of vaginal spotting and breakthrough bleeding was higher in women who had started taking oral contraceptives within the scope of the studies than in those who had taken oral contraceptives immediately beforehand. The frequency of these undesired bleeding effects was particularly high during the initial taking phase and then decreased over a period of time.

The problem of the invention is to so further develop the oral contraception process and administration form according to the preamble that the number of withdrawal bleedings is reduced whilst ensuring reliable contraception.

According to the invention this problem is solved in a further development of the aforementioned process in that the duration of the taking phase or phases is shorter than

18
5

in the final taking period and that the duration of the taking phase or phases in a taking period preceding a following taking period is shorter than in the latter.

It is possible for the final taking period to commence at the latest with the tenth taking cycle.

The invention also proposes that in at least one taking period the taking phase precedes the taking pause.

It is possible that in at least one taking period the taking pause precedes the taking phase.

In the process according to the invention it is possible to proceed in such a way that the duration of at least one of the taking pauses lasts 4 to 10 days.

It is also possible for at least one of the taking pauses to last 7 days.

The invention proposes that the duration of the taking pauses remains constant as from the final taking period.

The process according to the invention can also be implemented in such a way that the duration of the taking pauses remains constant as from the first taking period.

The duration of the taking phase(s) of at least the final taking period can be at least 40 days.

It is possible to proceed in such a way that the duration of the taking phase(s) of at least the final taking period lasts at least 45 days.

The invention also proposes that the duration of the taking phase(s) of at least the final taking period lasts at least 50 days.

It is possible for the duration of the taking phase(s) of at least the final taking period to last at least 60 days.

The invention optionally provides for the duration of the taking phase(s) of at least the final taking period to last at least 70 days.

According to the invention it is possible for the duration of the taking phase(s) of at least the final taking period to last at least 80 days.

The duration of the taking phase(s) of at least the last taking period can be at least 90 days.

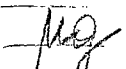
The invention also optionally provides for the duration of the taking phase(s) of at least the final taking period to last at least 100 days.

It is possible for the duration of the taking phase(s) of at least the final taking period to last at least 110 days.

In the process according to the invention it is also possible for the duration of the taking phase(s) of at least the final taking period to last a maximum of 150 days.

It is possible to use as the hormone component or components chlormadinone acetate with a dosage per daily unit of 0.5 to 3 mg inclusive, cyprotherone acetate 1 mg to 3 mg inclusive, desogestrel 0.05 to 0.2 mg inclusive, dienogest 1 to 3 mg inclusive, gestoden 0.035 to 0.1 mg inclusive, levonogestrel 0.025 to 0.5 mg inclusive, lynestrenol 0.25 to 3 mg inclusive, medroxyprogesterone acetate 75 to 200 mg inclusive, norethisterone 0.175 to 1.5 mg inclusive, norgestimate 0.1 to 0.3 mg inclusive, norgestrel 0.015 to 1.75 mg inclusive, norethisterone acetate 0.25 to 3 mg inclusive, norethisterone enanthate 100 to 300 mg inclusive, drospirinone 1.5 to 4 mg inclusive, ethinylestradiol 10 to 50

6

 æg inclusive, mestranol 25 to 50  æg inclusive and/or estradiol (as a representative of natural estrogen) 0.25 to 6 mg inclusive.

It is finally possible to proceed in such a way that the hormone component dosage is successively decreased between taking periods.

The administration form according to the invention, particularly for performing the aforementioned process, is characterized in that the number of hormone daily units in any packaging unit corresponding to a taking period preceding the following taking period is smaller than in the packaging unit corresponding to the in each case following taking period.

It is possible for the final taking period to commence at the latest with the tenth taking cycle.

It is possible to proceed in such a way that in at least one taking period the particular taking phase precedes the particular taking pause.

The invention also proposes that in at least one taking period the particular taking pause precedes the particular taking phase.

It is possible for the number of hormone daily units per taking phase of the packaging unit corresponding to the final taking period to be at least 40.

It is also possible to proceed in such a way that the number of hormone daily units per taking phase of the packaging unit corresponding to the final taking period is at least 45.

It is possible to proceed in such a way that the number of hormone daily units per taking phase of the packaging unit corresponding to the final taking period is at least 50.

The administration form according to the invention can also be characterized in that the number of hormone daily units per taking phase of the packaging unit corresponding to the last taking period is at least 60.

It is possible for the number of hormone daily units per taking phase of the packaging unit corresponding to the final taking period to be at least 70.

The invention also proposes that the number of hormone daily units per taking phase of the packaging unit corresponding to the last taking period is at least 80.

It is possible for the number of hormone daily units per taking phase of the packaging unit corresponding to the final taking period to be at least 90.

It is also possible for the number of hormone daily units per taking phase of the packaging unit corresponding to the final taking period to be at least 100.

The invention also optionally proposes that the number of hormone daily units per taking phase of the packaging unit corresponding to the final taking period is at least 110.

The administration according to the invention can also be such that the number of hormone daily units per taking phase of the packaging unit corresponding to the final taking period is a maximum of 150.

It is also possible for the hormone daily units to in each case incorporate 0.5 to 3 mg inclusive of chlormadinone acetate, 1 to 3 mg inclusive of cyprotherone acetate, 0.05 to 0.2 mg inclusive of desogestrel, 1 to 3 mg inclusive of dienogest, 0.035 to 0.1 mg inclusive of gestoden, 0.025 to 0.5 mg inclusive of levonorgestrel, 0.25 to 3 mg inclusive of lynestrenol, 75 to 200 mg inclusive of medroxyprogesterone acetate, 0.175 to 1.5 mg inclusive of norethisterone, 0.1 to 0.3 mg inclusive or norgestimate, 0.015 to 0.75 mg inclusive of norgestrel, 0.25 to 3 mg inclusive of norethisterone acetate, 100 to

300 ^{µg} mg inclusive of norethisterone enanthate, 1.5 to 4 ^{µg} mg inclusive of drospirinone, 10 to 50 ^{µg} µg inclusive of ethinylestradiol, 25 to 50 ^{µg} µg inclusive of mestranol and/or 0.25 to 6 mg inclusive of estradiol (as a representative of natural estrogen).

In the administration form according to the invention it is also possible for at least one of the packaging units per taking pause to contain placebos in a number corresponding to the duration of the taking pause.

It is finally possible for the hormone component dosage to be successively reduced between taking periods.

The invention is based on the surprising finding that it is possible to solve the set problem in that the taking phases are successively extended between taking intervals. The number of vaginal spotting and breakthrough bleeding effects occurring at the start is reduced as compared with those regimens in which as from the start the taking phase is longer than 21 or 24 days. The regimens according to the invention are particularly suitable for first users of oral contraceptives wishing to reduce the number of withdrawal bleedings.

The administration of the dosage units takes place in such a way that said dosage units are bundled as a taking cycle. If administration is e.g. to be in tablet form, then the tablets for a taking cycle can be administered with a blister. The bundle or bundles required for a taking period are offered in pack form. The packs for different taking periods are clearly marked as such. As the number of taking cycles of the final taking period is a priori unknown, the number of bundles contained is based on reasons not predetermined by the process.

It is naturally possible to use other administration forms. Thus, in the case of oral administration capsules and the like can be used in place of tablets. Transdermal administration possibilities include plasters, creams, gels, etc. It is also possible to use

implants and hormone-containing IUDs, whilst in each case obviously correspondingly adapting the dosage.

The contraceptive process according to the invention for women is subdivided into at least two taking periods and with the exception of the final taking period the duration of all the periods is predetermined. The duration of the final taking period is not fixed by the process according to the invention. The taking regimen can in fact be extended at random by the user of the process according to the invention.

Each taking period consists of exactly one taking cycle or a sequence of immediately following taking cycles. A taking cycle comprises a taking phase and a taking pause, which immediately follows or immediately precedes the taking phase. During the taking phase every day use is made of a combination of e.g. an estrogen and a gestagen, a gestagen alone or another suitable substance or substance combinations. During the taking pause such a taking does not occur, but placebos can be provided. All the taking phases of the same taking periods have the same duration, which also applies to the taking pauses. The duration of the taking phases increases between the individual taking periods, but this does not necessarily apply for the taking pauses.

The invention is described in greater detail hereinafter with the aid of examples.

In the examples "E" represents a taking phase and "P" a taking pause. The directly following number indicates the duration in days. The taking periods are made apparent by underlining. The continuation dots "..." stand for a random repetition of the taking cycles of the final taking period. The undefined number of taking cycles of the final period is represented by the symbol "#".

Example 1

Taking regimen: E21 P7 E42 P7 E42 P7 ...

8/00

There are two taking periods, the number of taking cycles being 1-#. the daily hormone units contain in each case 3 mg of drospirenone and 20 æg of ethinylestradiol.

Example 2

Taking regimen: E21 P5 E21 P5 E49 P7 E49 P7 ...

There are two taking periods, the number of taking cycles being 2-#. The daily hormone units in each case contain 3 mg of drospirenone and 30 æg of ethinylestradiol.

Example 3

Taking regimen: E24 P4 E24 P4 E24 P4 E48 P6 E48 P6 E48 P6 E48 P6 ...

There are two taking periods and the number of taking cycles is 3-#. The daily hormone units contain in each case 0.075 mg of gestoden and 20 æg of ethinylestradiol.

Example 4

Taking regimen: E21 P7 E49 P7 E77 P7 E77 P7 ...

There are three taking periods and the number of taking cycles is 1-1-#. The daily hormone units in each case contain 0.075 mg of gestoden and 30 æg of ethinylestradiol.

Example 5

Taking regimen: E20 P5 E40 P5 E40 P5 E60 P5 E60 P5 ...

There are three taking periods and the number of taking cycles is 1-2-#. The daily hormone units contain in each case 0.15 mg of levonorgestrel and 20 æg of ethinylestradiol.

Example 6

Taking regimen: E30 P6 E30 P6 E30 P6 E60 P6 E60 P6 E90 P6 E90 P6 ...

There are taking periods and the number of taking cycles is 3-2-#. The daily hormone units contain in each case 0.15 mg of levonorgestrel and 30 æg of ethinylestradiol.

Example 7

Taking regimen: E21 P4 E42 P5 E63 P6 E84 P7 E84 P7 ...

There are four taking periods and the number of taking cycles is 1-1-1-#. The daily hormone units contain in each case 2 mg of cyprotherone acetate and 35 æg of ethinylestradiol.

Example 8

Taking regimen: E21 P7 E49 P7 E77 P7 E105 P7 E105 P7 ...

There are four taking periods and the number of taking cycles is 1-1-1-#. The daily hormone units in each case contain 0.03 mg of norgestrel.

Example 9

Taking regimen: E24 P4 E72 P6 E72 P6 E96 P7 E120 P7 E120 P7 ...

There are four taking periods and the number of taking cycles is 1-2-1-#. The hormone daily units contain in each case 0.075 mg of gestoden and 20 æg of ethinylestradiol.

Example 10

9
9

In an administration form with E21 P7 E49 P7 E77 P7 E77 P7 ... tablets with an estrogen/gestagen combination are administered, being supplied as packaging units in blister form and for which three different packaging units are offered.

Packaging unit 1 contains a blister with 21 tablets of the estrogen/gestagen combination, packaging unit 2 contains a blister with 49 tablets of the estrogen/gestagen combination and packaging unit 3 contains three blisters with in each case 77 tablets of the estrogen/gestagen combination.

The features disclosed in the preceding description and in the claims can be essential to the implementation of the different embodiments of the invention either singly or in random combination.

CLAIMS

1. Process for hormonal contraception, in which in a plurality of substantially time-unlimited, linked taking periods and optionally having a sequence lasting several years and which in each case comprise at least one taking cycle with a duration-constant taking phase lasting several days within the particular taking period and a taking pause lasting several days, in which taking phase or phases per day administration takes place of a daily unit with at least one contraceptively acting hormone component, such as estrogen and/or gestagen, and in the taking pause or pauses administration takes place either of placebos free from any hormone component or the particular taking pause remains entirely administration-free and the duration of the taking phase or phases of at least the final taking period lasts at least 22 days, characterized in that the duration of the taking phase or phases in any taking period preceding a following taking period is shorter than in the in each case following taking period.
2. Process according to claim 1, characterized in that the final taking period starts at the latest with the tenth taking cycle.
3. Process according to claim 1 or 2, characterized in that in at least one taking period the particular taking phase precedes the particular taking pause.
4. Process according to claim 1 or 2, characterized in that in at least one taking period the particular taking pause precedes the particular taking phase.
5. Process according to one of the preceding claims, characterized in that the duration of at least one of the taking pauses is 4 to 10 days.
6. Process according to claim 5, characterized in that the duration of at least one of the taking pauses is 7 days.

10
10

7. Process according to one of the preceding claims, characterized in that the duration of the taking pauses in the final taking period is constant.
8. Process according to claim 7, characterized in that the duration of the taking pauses as from and including the first taking period is constant.
9. Process according to one of the preceding claims, characterized in that the duration of the taking phase or phases of at least the final taking period is at least 40 days.
10. Process according to claim 9, characterized in that the duration of the taking phase or phases of at least the final taking period is at least 45 days.
11. Process according to claim 9 or 10, characterized in that the duration of the taking phase or phases of at least the final taking period is at least 50 days.
12. Process according to one of the claims 9 to 11, characterized in that the duration of the taking phase or phases of at least the final taking period is at least 60 days.
13. Process according to one of the claims 9 to 12, characterized in that the duration of the taking phase or phases of at least the final taking period is at least 70 days.
14. Process according to one of the claims 9 to 13, characterized in that the duration of the taking phase or phases of at least the final taking period is at least 80 days.
15. Process according to one of the claims 9 to 14, characterized in that the duration of the taking phase or phases of at least the final taking period is at least 90 days.
16. Process according to one of the claims 9 to 15, characterized in that the duration of the taking phase or phases of at least the final taking period is at least 100 days.

17. Process according to one of the claims 9 to 16, characterized in that the duration of the taking phase or phases of at least the final taking period is at least 110 days.

18. Process according to one of the claims 9 to 17, characterized in that the duration of the taking phase or phases of at least the final taking period is a maximum of 150 days.

19. Process according to one of the preceding claims, characterized in that as hormone component or components use is made of chlormadinone acetate with a dosage per daily unit of 0.5 to 3 mg inclusive, cyprotherone acetate 1 to 3 mg inclusive, desogestrel 0.05 to 0.2 mg inclusive, dienogest 1 to 3 mg inclusive, gestoden 0.035 to 0.1 mg inclusive, levonorgestrel 0.025 to 0.5 mg inclusive, lynestrenol 0.25 to 3 mg inclusive, medroxyprogesterone acetate 75 to 200 mg inclusive, norethisterone 0.175 to 1.5 mg inclusive, norgestimate 0.1 to 0.3 mg inclusive, norgestrel 0.015 to 0.75 mg inclusive, norethisterone acetate 0.25 to 3 mg inclusive, norethisterone enanthate 100 to 300 mg inclusive, drospirinone 1.5 to 4 mg inclusive, ethinylestradiol 10 to 50 æg inclusive, mestranol 25 to 50 æg inclusive and/or estradiol (as a representative of natural estrogen) 0.25 to 4 mg inclusive.

20. Process according to one of the preceding claims, characterized in that the hormone component dosage is successively decreased between taking periods.

21. Administration form for hormonal contraception, particularly for performing the process according to one of the preceding claims, with a plurality of packaging units, which in each case comprise at least one set of daily units to be administered within a taking cycle of a taking period, within which the duration of the taking phases is constant, comprising in each case a taking phase and a neighbouring taking pause and which in each case have a number of daily hormone units corresponding to the duration of the taking phase or phases, with in each case a content of at least one contraceptively acting hormone component, such as estrogen and/or gestagen, as well as optionally a number of placebos corresponding to the duration of the taking pause or pauses, the duration of the taking phase or phases of at least the last of the taking periods following

the first taking period is at least 22 days, characterized in that the number of daily hormone units in any packaging unit corresponding to a taking period preceding a following taking period is smaller than in the packaging unit corresponding to the in each case following taking period.

22. Administration form according to claim 21, characterized in that the last taking period commences at the latest with the tenth taking cycle.

23. Administration form according to claim 21 or 22, characterized in that in at least one taking period the taking phase precedes the taking pause.

24. Administration form according to claim 21 or 22, characterized in that in at least one taking period the taking pause precedes the taking phase.

25. Administration form according to one of the claims 21 to 24, characterized in that the number of daily hormone units per taking phase of the packaging unit corresponding to the last taking period is at least 40.

26. Administration form according to claim 25, characterized in that the number of daily hormone units per taking phase of the packaging unit corresponding to the last taking period is at least 45.

27. Administration form according to claim 25 or 26, characterized in that the number of daily hormone units per taking phase of the packaging unit corresponding to the last taking period is at least 50.

28. Administration form according to one of the claims 25 to 27, characterized in that the number of daily hormone units per taking phase of the packaging unit corresponding to the last taking period is at least 60.

29. Administration form according to one of the claims 25 to 28, characterized in that the number of daily hormone units per taking phase of the packaging unit corresponding to the last taking period is at least 70.

30. Administration form according to one of the claims 25 to 29, characterized in that the number of daily hormone units per taking phase of the packaging unit corresponding to the final taking period is at least 80.

31. Administration form according to one of the claims 25 to 30, characterized in that the number of daily hormone units per taking phase of the packaging unit corresponding to the last taking period is at least 90.

32. Administration form according to one of the claims 25 to 31, characterized in that the number of daily hormone units per taking phase of the packaging unit corresponding to the last taking period is at least 100.

33. Administration form according to one of the claims 25 to 32, characterized in that the number of daily hormone units per taking phase of the packaging unit corresponding to the last taking period is at least 110.

34. Administration form according to one of the claims 25 to 33, characterized in that the number of daily hormone units per taking phase of the packaging unit corresponding to the last taking period is a maximum of 150.

35. Administration form according to one of the claims 21 to 34, characterized in that the daily hormone units have in each case 0.5 to 3 mg inclusive of chlormadinone acetate, 1 to 3 mg inclusive of cyprotherone acetate, 0.05 to 0.2 mg inclusive of desogestrel, 1 to 3 mg inclusive of dienogest, 0.035 to 0.1 mg inclusive of gestoden, 0.025 to 0.5 mg inclusive of levonorgestrel, 0.25 to 3 mg inclusive of lynestrenol, 75 to 200 mg inclusive of medroxyprogesterone acetate, 0.175 to 1.5 mg inclusive of norethisterone, 0.1 to 0.3 mg inclusive of norgestimate, 0.015 to 0.75 mg inclusive of

12
12

norgestrel, 0.25 to 3 mg inclusive of norethisterone acetate, 100 to 300 mg inclusive of norethisterone enanthate, 1.5 to 4 mg inclusive of drospirinone, 10 to 50 æg inclusive of ethinylestradiol, 25 to 50 æg inclusive of mestranol and/or 0.25 to 6 mg inclusive of estradiol (as a representative of natural estrogen).

36. Administration form according to one of the claims 21 to 34, characterized in that at least one of the packaging units per taking pause has placebos in a number corresponding to the duration of the particular taking pause.

37. Administration form according to one of the claims 21 to 36, characterized in that the hormone component dosage successively decreases between taking periods.

(12) Publicación de la solicitud internacional bajo PCT

(19) Organización mundial de propiedad intelectual

Oficina Internacional

(43) Fecha de publicación internacional : 21 de marzo de 2002 (21.03.2002)

(10) Número de publicación internacional: **WO 02/22110 A2**

(51) Clasificación internacional de patentes: **A61K 31/00**

(21) Número de solicitud internacional: PCT/EP01/10207

(22) Fecha de presentación internacional: 5 de septiembre de 2001 (05.09.2001)

(25) Idioma de la presentación: Inglés

(26) Idioma de la publicación: Inglés

(30) Antecedentes de prioridad: 100 45 380.5 14 de septiembre de 2000 (14.09.2000) DE

(71) Solicitante: (para todos los países designados excepto EEUU):

SCHERING AKTIENGESELLSCHAFT [DE/DE], Müllerstrasse 178, 13342 Berlin (DE).

(72) Inventor y

(75) Inventores en la solicitud (para EEUU solamente): KULMANN, Hermann [DE/DE], Dachsbau 78 A, 13503 Berlin (DE).

(74) Agente: **GODDAR, HEINZ**; Boehmert & Boehmert, Hollerallee 32, 28209 Bremen (DE).

(81) Estados designados(nacionales): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Estados designados(regionales): Patente ARIPO GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Patente euroasiáticas (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Patente europeas

(AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), Patente OAPI
(BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG).

Publicado:

- sin informe de búsqueda internacional y a ser publicado nuevamente al recibir dicho informe.

(54) Título: Método de anticoncepción y forma de administración del mismo.

(57) Resumen: Un método para la anticoncepción hormonal, que consta de una pluralidad de períodos de ingesta ligados entre sí, sustancialmente ilimitados en el tiempo, y que optativamente presentan una secuencia que se extiende por varios años y que en cada caso comprende por lo menos un ciclo de ingesta, con una fase de ingesta de duración constante que dura varios días dentro de dicho período de ingesta particular, y una pausa entre ingestas que dura varios días. En la o las fases de ingesta, la administración diaria consiste de una unidad diaria que contiene por lo menos un componente hormonal de acción anticonceptiva, tal como un estrógeno y/o gestágeno. En la o las pausas entre ingestas, la administración consiste ya sea de placebos libres de todo componente hormonal o bien, la pausa entre ingestas particular permanece completamente libre de administración alguna. La duración de la o las fases de ingesta de por lo menos el último período de ingesta dura por la menos 22 días. La o las fases de ingesta están caracterizadas porque la duración de las mismas en cualquier período de ingesta que precede a un siguiente período de ingesta es menor que la duración, en cada caso, de dicho período de ingesta siguiente. También se describe una forma de administración para una anticoncepción hormonal y, en particular, para aplicar dicha método.

MÉTODO DE ANTICONCEPCIÓN Y FORMA DE ADMINISTRACIÓN DEL MISMO

Un método de anticoncepción hormonal que consta de una pluralidad de períodos de ingesta ligados entre sí, sustancialmente ilimitados en el tiempo, y que optativamente presenta una secuencia que dura varios años y que, en cada caso, comprende por lo menos un ciclo de ingesta, con una fase de ingesta constante que dura varios días dentro del período de ingesta respectivo, y una pausa entre ingestas de varios días de duración. Durante la o las fases de ingesta, la administración diaria consta de una unidad diaria que consiste de por lo menos un componente hormonal que actúa como anti-conceptivo, tal como un estrógeno y/o gestágeno. Durante la o las pausas entre ingestas, la administración consta ya sea de placebos libres de todo componente hormonal o bien, la pausa entre ingestas permanece completamente libre de administración alguna. La duración de la o las fases de ingesta de por lo menos el período de ingesta final dura por lo menos 22 días. La forma de administración para la anticoncepción hormonal, en particular para practicar el método mencionado previamente, consta de una pluralidad de envases unitarios que, en cada caso, contienen por lo menos un conjunto de unidades diarias que serán administradas dentro de un ciclo de ingesta del período de ingesta, durante cuyo transcurso la duración de las fases de ingesta es constante y que comprende en cada caso una fase de ingesta y una pausa

entre ingestas sucesivas. En cada caso comprende por lo menos una cantidad de unidades diarias de hormona correspondiente a la duración de la o las fases de ingesta, con un contenido en cada caso de por lo menos un componente hormonal que actúa como anticonceptivo, tal como un estrógeno y/o gestágeno, así como una cantidad de placebos correspondientes a la duración de la o las pausas entre ingestas. La duración de la o las fases de ingesta de por lo menos el último de los períodos de ingesta siguiente al primer período de ingesta alcanza los 22 días.

Los anticonceptivos orales se toman típicamente por un período de 21 días. Esta fase de ingesta generalmente es seguida de una pausa entre ingestas de 7 días que conduce a la menstruación (sangrado de retiro). Este régimen de ingesta se desarrolló alrededor de 1960 porque correspondía en general al ciclo natural, pero no hay un fundamento médico para el mismo.

Durante los últimos 20 años se han llevado a cabo pruebas repetidas con pausas entre ingestas más prolongadas lo cual demuestra que es posible reducir la cantidad de sangrados de retiro. En dos estudios de largo plazo, descritos por N.B. London et al. en un artículo con el título "Acceptability of an oral contraceptive that reduces the frequency of menstruation: the tri-cycle pill regimen". British Medical Journal, 1977, 2, págs. 487-490 o por A.C. Cachrima-

12
17

nidou et al. en un artículo con el título "Long-interval treatment regimen with a desogestrel-containing oral contraceptive", publicado en Contraception, 1993: 48, págs. 205-216, se evaluó por un lado un régimen que comprendía ingestas durante 84 días, seguido de una pausa de 6 días y por el otro un régimen de 63 días seguido de una pausa de 7 días. Durante estas pruebas se estableció que no se reduce la seguridad ni la confiabilidad anticonceptivas. Incluso se dio por sentado que los errores de ingesta, como p.ej. olvido de tabletas, tenían un efecto menor que en el caso de los regímenes convencionales. Sin embargo, se estableció al mismo tiempo que la cantidad de efectos de goteo vaginal y sangrado de retiro indeseados aumentaba con la fase de ingesta prolongada. Esto también se observaba en los estudios de corto plazo, tal como p.ej. el de W.S. de Voogd en un artículo con el título "Postponement of withdrawal bleeding with a monophasic oral contraceptive containing desogestrel and ethinylestradiol", publicado en Contraception, 44, N° 2, agosto, 1991, págs. 107-112. La frecuencia de goteo vaginal y sangrado de retiro era más alta en mujeres que habían comenzado a ingerir anticonceptivos orales dentro del período de los estudios que en las mujeres que habían comenzado a ingerirlas de antemano. La frecuencia de estos efectos de sangrado indeseados era particularmente alta durante la fase de ingesta inicial y luego disminuyó sobre un período de

tiempo dado.

El problema de la invención consiste entonces en desarrollar un método de anticoncepción oral, así como una forma de administración acorde con el objeto de la invención de reducir la cantidad de sangrados de retiro en tanto se asegura una anticoncepción confiable.

De acuerdo con la invención, este problema se resuelve con el desarrollo adicional del método ya mencionado, por cuanto la duración de la o las fases de ingesta es menor que en el período de ingesta final y la duración de la o las fases de ingesta en un período de ingesta que precede a un siguiente período de ingesta es menor que éste último.

Es posible que el período de ingesta final comience a más tardar con el décimo ciclo de ingesta.

La invención también propone que en por lo menos un período de ingesta, la fase de ingesta preceda a la pausa entre ingestas.

En el método acorde con la invención es posible proceder de manera tal que la duración de por lo menos una de las pausas entre ingestas dure de 4 a 10 días.

También es posible que por lo menos una de las pausas entre ingestas dure 7 días.

La invención propone que la duración de las pausas entre ingestas sea constante hasta el período de ingesta final.

El método acorde con la invención también se puede implementar de manera tal que la duración de las pausas entre ingestas permanezca constante desde el primer período de ingesta.

La duración de la o las fases de ingesta de por lo menos el período de ingesta final puede ser de por lo menos 40 días.

Es posible proceder de manera tal que la duración de la o las fases de ingesta de por lo menos el período de ingesta final sea de por lo menos 45 días.

La invención también propone que la duración de la o las fases de ingesta de por lo menos el período de ingesta final sea de por lo menos 50 días.

Es posible que la duración de la o las fases de ingesta de por lo menos el período de ingesta final sea de por lo menos 60 días.

La invención provee optativamente una duración de la o las fases de ingesta de por lo menos el período de ingesta final que sea de por lo menos 70 días.

De acuerdo con la invención, es posible que la duración de la o las fases de ingesta de por lo menos el período de ingesta final sea de por lo menos 80 días.

La duración de la o las fases de ingesta de por lo menos el último período de ingesta es de por lo menos 90 días.

La invención también provee optativamente una duración

de la o las fases de ingesta de por lo menos el último período de ingesta de por lo menos 100 días.

Es posible que la duración de la o las fases de ingesta de por lo menos el período de ingesta final sea de por lo menos 110 días.

En el método acorde con la invención, también es posible que la duración de la o las fases de ingesta de por lo menos el período de ingesta final sea de 150 días como máximo.

Es posible utilizar los siguientes compuestos como componente o componentes hormonales: acetato de clormadinona con una dosificación de 0,5 a 3 mg inclusive por unidad diaria; acetato de ciproterona, 1 mg a 3 mg inclusive; desogestrel, 0,05 a 0,2 mg inclusive; dienogest, 1 a 3 mg inclusive; gestoden, 0,035 a 0,1 mg inclusive; levonogestrel, 0,025 a 0,5 mg inclusive, linestrenol, 0,25 a 3 mg inclusive; acetato de medroxiprogesterona, 75 a 200 mg inclusive; noretisterona, 0,175 a 1,5 mg inclusive; norgestimato, 0,1 a 0,3 mg inclusive; norgestrel, 0,015 a 1,75 mg inclusive; acetato de noretisterona, 0,25 a 3 mg inclusive; enantato de noretisterona, 100 a 300 mg inclusive; drospirinona, 1,5 a 4 mg inclusive; etinilestradiol, 10 a 50 µg inclusive; mestranol, 25 a 50 µg inclusive y/o estradiol (como representante de un estrógeno natural), 0,25 a 6 mg inclusive.

Finalmente, es posible proceder de manera tal que la

dosificación del componente hormonal disminuya sucesivamente entre los períodos de ingesta.

La forma de administración acorde con la invención, en particular para llevar a cabo el método descrito previamente, está caracterizada porque la cantidad de unidades diarias de hormona presente en cualquier unidad de envasado correspondiente a un período de ingesta que precede a un siguiente período de ingesta es menor que en la unidad de envasado correspondiente a cada uno de los siguientes períodos de ingesta.

Es posible que el periodo de ingesta final comience a más tardar con el décimo ciclo de ingesta.

Es posible proceder de manera tal que en por lo menos un período de ingesta la fase de ingesta particular preceda a la pausa entre ingestas particular.

La invención también propone que en por lo menos un período de ingesta, la pausa entre ingestas particular precede a la fase de ingesta particular.

Es posible que la cantidad de unidades diarias de hormona por fase de ingesta de la unidad de envasado correspondiente al período de ingesta final sea de por lo menos 40.

También es posible proceder de manera tal que la cantidad de unidades diarias de hormona por fase de ingesta de la unidad de envasado correspondiente al período de ingesta final sea de por lo menos 45.

Es posible proceder de manera tal que la cantidad de unidades diarias de hormona por fase de ingesta de la unidad de envasado correspondiente al período de ingesta final sea de por lo menos 50.

La forma de administración acorde con la invención también está caracterizada porque la cantidad de unidades diarias de hormona por fase de ingesta de la unidad de envasado correspondiente al último período de ingesta es de por lo menos 60.

Es posible que la cantidad de unidades diarias de hormona por fase de ingesta de la unidad de envasado correspondiente al período de ingesta final sea de por lo menos 70.

La invención también propone que la cantidad de unidades diarias de hormona por fase de ingesta de la unidad de envasado correspondiente al último período de ingesta es de por lo menos 80.

Es posible que la cantidad de unidades diarias de hormona por fase de ingesta de la unidad de envasado correspondiente al período de ingesta final sea de por lo menos 90.

También es posible que la cantidad de unidades diarias de hormona por fase de ingesta de la unidad de envasado correspondiente al período de ingesta final sea de por lo menos 100.

La invención también propone optativamente que la cantidad de unidades diarias de hormona por fase de ingesta de

la unidad de envasado correspondiente al período de ingesta final sea de por lo menos 110.

La administración acorde con la invención también puede ser tal que la cantidad de unidades diarias de hormona por fase de ingesta de la unidad de envasado correspondiente al período de ingesta final sea de 150 como máximo.

También es posible que las unidades diarias de hormona incorporen en cada caso 0,5 a 3 mg inclusive de acetato de clormedinona; 1 a 3 mg inclusive de acetato de ciproterona; 0,05 a 0,2 mg de desogestrel inclusive; 1 a 3 mg inclusive de dienogest; 0,035 a 0,1 mg inclusive de gestoden; 0,025 a 0,5 mg inclusive de levonogestrel, 0,25 a 3 mg inclusive de linestrenol; 75 a 200 mg inclusive de acetato de medroxiprogesterona; 0,175 a 1,5 mg inclusive de noretisterona; 0,1 a 0,3 mg inclusive de norgestimato; 0,015 a 1,75 mg inclusive de norgestrel; 0,25 a 3 mg inclusive de acetato de noretisterona; 100 a 300 mg inclusive de enantato de norestisterona; 1,5 a 4 mg inclusive de drospirinona; 10 a 50 µg inclusive de etinilestradiol; 25 a 50 µg inclusive de mestranol y/o 0,25 a 6 mg inclusive de estradiol (como representante de un estrógeno natural).

En la forma de administración acorde con la invención también es posible que por lo menos una de las unidades de envasado por pausa entre ingestas contenga placebos en una cantidad correspondiente a la duración de dicha pausa entre

ingestas.

Finalmente, es posible reducir sucesivamente la dosificación del componente hormonal entre los períodos de ingesta.

La invención se basa en el hallazgo inesperado que es posible resolver el problema planteado prolongando sucesivamente las fases de ingesta entre intervalos de ingesta. La cantidad de efectos de goteo vaginal y sangrado de retiro que tienen lugar al comienzo se reduce en comparación con aquellos regímenes en los cuales la fase de ingesta es mayor que 21 ó 24 días desde el principio. Los regímenes acordes con la invención son particularmente adecuados para los usuarios principiantes de anticonceptivos orales que desean reducir la cantidad de sangrados de retiro.

La administración de las unidades de dosificación se produce de manera tal que dichas unidades de dosificación están agrupadas como un ciclo de ingesta. Si la administración fuera, p.ej., en la forma de tabletas, entonces las tabletas correspondientes a un ciclo de ingesta se pueden administrar en un blíster. La o las agrupaciones necesarias para un período de ingesta se ofrecen en un envase. Los envases para los diferentes períodos de ingesta están indicados claramente como tales. Dado que la cantidad de ciclos de ingesta del período de ingesta final se desconoce de antemano, la cantidad de agrupaciones contenidas se basa en razo-

nes que no están predeterminadas por el método.

Naturalmente, es posible usar otras formas de administración. Por consiguiente, en el caso de una administración oral se pueden usar cápsulas y semejantes en lugar de las tabletas. Las posibilidades de una administración transdérmica incluyen apósitos, cremas, geles, etc. También es posible usar implantes y DIU que contienen hormonas, siempre que se adapte la dosificación de manera correspondiente para cada caso.

El método anticonceptivo para mujeres acorde con la invención se subdivide en por lo menos dos períodos de ingesta y, con excepción del período de ingesta final, la duración de todos los períodos está predeterminada. La duración del período de ingesta final no está fijada por el método acorde con la invención. El régimen de ingesta puede, de hecho, ser prolongado aleatoriamente por el usuario del método acorde con la invención.

Cada período de ingesta consiste de exactamente un ciclo de ingesta o una secuencia de ciclos de ingesta consecutivos. Un ciclo de ingesta comprende una fase de ingesta y una pausa entre ingestas, que sigue inmediatamente o precede inmediatamente a la fase de ingesta. Durante la fase de ingesta, se utiliza diariamente una combinación de p.ej., un estrógeno y un gestágeno, un gestágeno solamente u otra sustancia o combinación de sustancias adecuada. Durante la pau-

sa entre ingestas, no se produce dicha ingesta, sino que se puede suministrar un placebo. Todas las fases de ingesta de los mismos períodos de ingesta tienen la misma duración, lo cual también se aplica a las pausas entre ingestas. La duración de la fase de ingesta aumenta entre los períodos de ingesta individuales, pero esto no se aplica necesariamente a las pausas entre ingestas.

La invención se describe con mayor detalle de aquí en adelante con relación a los siguientes ejemplos.

En los ejemplos, "E" representa la fase de ingesta y "P" la pausa entre ingestas. El número inmediatamente siguiente indica la duración en días. Los períodos de ingesta se indican mediante un subrayado. Los puntos continuos "... " representan una repetición aleatoria de los ciclos de ingesta del último período de ingesta. La cantidad no definida de ingesta de los ciclos de ingesta del período final está representada por el símbolo "a".

Ejemplo 1:

Régimen de ingesta: E21 P7 E42 P7 E42 P7 ...

Hay dos períodos de ingesta, siendo la cantidad de ciclos de ingesta de 1-#. Las unidades diarias de hormona contienen, en cada caso, 3 mg de drospirenona y 20 µg de etinilestradiol.

Ejemplo 2:

Régimen de ingesta: E21 P5 E21 P5 E49 P7 E49 P7 ...

Hay dos períodos de ingesta, siendo la cantidad de ciclos de ingesta de 2-#. Las unidades diarias de hormonas contienen, en cada caso, 3 mg de drospirenona y 30 µg de etinilestradiol.

Ejemplo 3:

Régimen de ingesta: E24 P4 E24 P4 E24 P4 E48 P6 E48 P6 E48 P6 E48 P6 ...

Hay dos períodos de ingesta, siendo la cantidad de ciclos de ingesta de 3-#. Las unidades diarias de hormonas contienen, en cada caso, 0,075 mg de gestoden y 20 µg de etinilestradiol.

Ejemplo 4:

Régimen de ingesta: E21 P7 E49 P7 E77 P7 E77 P7 ...

Hay tres períodos de ingesta, siendo la cantidad de ciclos de ingesta de 1-1-#. Las unidades diarias de hormonas contienen, en cada caso, 0,075 mg de gestoden y 30 µg de etinilestradiol.

Ejemplo 5:

Régimen de ingesta: E20 P5 E40 P5 E40 P5 E60 P5 E60 P5 ...

Hay tres períodos de ingesta, siendo la cantidad de ciclos de ingesta de 1-2-#. Las unidades diarias de hormonas contienen, en cada caso, 0,15 mg de levonogestrel y 20 µg de etinilestradiol.

Ejemplo 6:

Régimen de ingesta: E30 P6 E30 P6 E30 P6 E60 P6 E60 P6 E90

P6 E90 P6 ...

Hay períodos de ingesta, siendo la cantidad de ciclos de ingesta de 3-2-#. Las unidades diarias de hormonas contienen, en cada caso, 0,15 mg de levonogestrel y 30 µg de etinilestradiol.

Ejemplo 7:

Régimen de ingesta: E21 P4 E42 P5 E63 P6 E84 P7 E84 P7 ...

Hay cuatro períodos de ingesta, siendo la cantidad de ciclos de ingesta de 1-1-1-#. Las unidades diarias de hormonas contienen, en cada caso, 2 mg de acetato de ciproterona y 35 µg de etinilestradiol.

Ejemplo 8:

Régimen de ingesta: E21 P7 E49 P7 E77 P7 E105 P7 E105 P7 ...

Hay cuatro períodos de ingesta, siendo la cantidad de ciclos de ingesta de 1-1-1-#. Las unidades diarias de hormonas contienen, en cada caso, 0,03 mg de norgestrel.

Ejemplo 9:

Régimen de ingesta: E24 P4 E72 P6 E72 P6 E96 P7 E120 P7 ...

Hay cuatro períodos de ingesta, siendo la cantidad de ciclos de ingesta de 1-2-1-#. Las unidades diarias de hormonas contienen, en cada caso, 0,075 mg de gestoden y 20 µg de etinilestradiol.

Ejemplo 10:

En una forma de administración con E21 P7 E49 P7 E77 P7 E77 P7 ..., se administraron tabletas con una combinación

de estrógeno/gestágeno suministrada como unidades de envasado en la forma de una blíster y para las cuales se ofrecen tres unidades de envasado diferentes.

La unidad de envasado 1 contiene un blíster con 21 tabletas de la combinación de estrógeno/gestágeno, la unidad de envasado 2 contiene un blíster con 49 tabletas de la combinación de estrógeno/gestágeno y la unidad de envasado 3 contiene tres blísters con 77 tabletas cada uno de la combinación de estrógeno/gestágeno.

Las características descritas en la memoria precedente y en las reivindicaciones pueden ser esenciales para la implementación de las diferentes realizaciones de la invención, ya sea de forma individual o en combinaciones aleatorias.

REIVINDICACIONES

1. Un método para la anticoncepción hormonal, CARACTERIZADO PORQUE consta de una pluralidad de períodos de ingesta ligados entre sí, ilimitados en el tiempo, y que optativamente poseen una secuencia que dura varios años y que, en cada caso, comprende: por lo menos un ciclo de ingesta, con una fase de ingesta de duración constante, que dura varios días, comprendido dentro del período de ingesta particular, y una pausa entre ingestas que dura varios días, donde en dicha fase o fases la administración diaria consta de una unidad diaria con por lo menos un componente hormonal que actúa como anticonceptivo, tal como un estrógeno y/o gestágeno, y en la o las pausas entre ingestas la administración consta ya sea de un placebo libre de todo componente hormonal o bien, dicha pausa entre ingestas está completamente libre de todo tipo de administración; y la duración de la o las fases de ingesta de por lo menos el último período de ingesta dura por lo menos 22 días, caracterizado porque la duración de la fase o de las fases de ingesta en cualquier período de ingesta que precede a un período de ingesta siguiente es menor que cada uno de los siguientes períodos de ingesta.

2. El método acorde con la reivindicación 1, CARACTERIZADO PORQUE el período de ingesta final comienza a más

tardar con el décimo ciclo de ingesta.

3. El método acorde con la reivindicación 1 ó 2, CARACTERIZADO PORQUE en por lo menos un período de ingesta la fase de ingesta particular precede la pausa entre ingestas particular.

4. El método acorde con la reivindicación 1 ó 2, CARACTERIZADO PORQUE en por lo menos un período de ingesta la pausa entre ingestas particular precede a la fase de ingesta particular.

5. El método acorde con una de las reivindicaciones precedentes, CARACTERIZADO PORQUE la duración de por lo menos una de las pausas entre ingestas es de 4 a 10 días.

6. El método acorde con la reivindicación 5, CARACTERIZADO PORQUE la duración de por lo menos una de las pausas entre ingestas es de 7 días.

7. El método acorde con una de las reivindicaciones precedentes, CARACTERIZADO PORQUE la duración de las pausas entre ingestas en el período de ingesta final es constante.

8. El método acorde con la reivindicación 7, CARACTERIZADO PORQUE la duración de las pausas entre ingestas desde el primer período de ingesta inclusive es constante.

9. El método acorde con una de las reivindicaciones precedentes, CARACTERIZADO PORQUE la duración de la o las fases de ingesta de por lo menos el período de ingesta final es de por lo menos 40 días.

10. El método acorde con la reivindicación 9, CARACTERIZADO PORQUE la duración de la o las fases de ingesta de por lo menos el período de ingesta final es de por lo menos 45 días.

11. El método acorde con las reivindicaciones 9 ó 10, CARACTERIZADO PORQUE la duración de la o las fases de ingesta de por lo menos el período de ingesta final es de por lo menos 50 días.

12. El método acorde con una de las reivindicaciones 9 a 11, CARACTERIZADO PORQUE la duración de la o las fases de ingesta de por lo menos el período de ingesta final es de por lo menos 60 días.

13. El método acorde con una de las reivindicaciones 9 a 12, CARACTERIZADO PORQUE la duración de la o las fases de ingesta de por lo menos el período de ingesta final es de por lo menos 70 días.

14. El método acorde con una de las reivindicaciones 9 a 13, CARACTERIZADO PORQUE la duración de la o las fases de ingesta de por lo menos el período de ingesta final es de por lo menos 80 días.

15. El método acorde con una de las reivindicaciones 9 a 14, CARACTERIZADO PORQUE la duración de la o las fases de ingesta de por lo menos el período de ingesta final es de por lo menos 90 días.

16. El método acorde con una de las reivindicaciones 9

a 15, CARACTERIZADO PORQUE la duración de la o las fases de ingesta de por lo menos el período de ingesta final es de por lo menos 100 días.

17. El método acorde con una de las reivindicaciones 9 a 16, CARACTERIZADO PORQUE la duración de la o las fases de ingesta de por lo menos el período de ingesta final es de por lo menos 110 días.

18. El método acorde con una de las reivindicaciones 9 a 17, CARACTERIZADO PORQUE la duración de la o las fases de ingesta de por lo menos el período de ingesta final es de 150 días como máximo.

19. El método acorde con una de las reivindicaciones precedentes, CARACTERIZADO PORQUE como componente o componentes hormonales se utiliza acetato de clormadinona con una dosificación por unidad diaria de 0,5 a 3 mg inclusive; acetato de ciproterona, 1 a 3 mg inclusive; desogestrel, 0,05 a 0,2 mg inclusive; dienogest, 1 a 3 mg inclusive; gestoden, 0,035 a 0,1 mg inclusive; levonogestrel, 0,025 a 0,5 mg inclusive; linestrenol, 0,25 a 3 mg inclusive; acetato de medroxiprogesterona, 75 a 200 mg inclusive; noretisterona, 0,175 a 1,5 mg inclusive; norgestimato, 0,1 a 0,3 mg inclusive; norgestrel, 0,015 a 0,75 mg inclusive; acetato de noretisterona, 0,25 a 3 mg inclusive; enantato de noretisterona, 100 a 300 mg inclusive; drospirinona, 1,5 a 4 mg inclusive; etinilestradiol, 10 a 50 µg inclusive; mestranol,

25 a 50 µg inclusive y/o estradiol (como representante de un estrógeno natural), 0,25 a 4 mg inclusive.

20. El método acorde con una de las reivindicaciones precedentes, CARACTERIZADO PORQUE la dosificación del componente hormonal disminuye sucesivamente entre los períodos de ingesta.

21. Una forma de administración para una anticoncepción hormonal, en particular para su aplicación en el método acorde con una de las reivindicaciones precedentes, CARACTERIZADA PORQUE consta de una pluralidad de unidades de envasado, que en cada caso comprende por lo menos un conjunto de unidades diarias que serán administradas dentro de un ciclo de ingesta de un período de ingesta, en el cual la duración de las fases de ingesta es constante, que en cada caso comprende una fase de ingesta y una pausa entre ingestas sucesivas y que en cada caso contiene una cantidad de unidades diarias de hormona correspondiente a la duración de la o las fases de ingesta, en cada caso con un contenido de por lo menos un componente hormonal que actúa como anticonceptivo, tal como estrógeno y/o gestágeno, así como, optativamente, una cantidad de placebos correspondientes a la duración de la o las pausas entre ingestas, siendo la duración de la o las fases de ingesta de por lo menos el último de los períodos de ingesta siguientes al primer período de ingesta de por lo menos 22 días, caracterizado porque la cantidad de

unidades diarias de hormona en cualquier unidad de envasado correspondiente a un período de ingesta que precede a un siguiente período de ingesta es menor que en la unidad de envasado correspondiente al siguiente período de ingesta según el caso.

22. La forma de administración acorde con la reivindicación 21, CARACTERIZADA PORQUE el último período de ingesta comienza a más tardar con el décimo ciclo de ingesta.

23. La forma de administración acorde con la reivindicación 21 ó 22, CARACTERIZADA PORQUE en por lo menos un período de ingesta la fase de ingesta precede a la pausa entre ingestas.

24. La forma de administración acorde con la reivindicación 21 ó 22, CARACTERIZADA PORQUE en por lo menos un período de ingesta la pausa entre ingestas precede a la fase de ingesta.

25. La forma de administración acorde con la reivindicación 21 a 24, CARACTERIZADA PORQUE la cantidad de unidades diarias de hormona por fase de ingesta en la unidad de envasado correspondiente al último período de ingesta es de por lo menos 40.

26. La forma de administración acorde con la reivindicación 25, CARACTERIZADA PORQUE la cantidad de unidades diarias de hormona por fase de ingesta en la unidad de envasado correspondiente al último período de ingesta es de por lo

menos 45.

27. La forma de administración acorde con la reivindicación 25 ó 26, CARACTERIZADA PORQUE la cantidad de unidades diarias de hormona por fase de ingesta en la unidad de envasado correspondiente al último período de ingesta es de por lo menos 50.

28. La forma de administración acorde con la reivindicación 25 a 27, CARACTERIZADA PORQUE la cantidad de unidades diarias de hormona por fase de ingesta en la unidad de envasado correspondiente al último período de ingesta es de por lo menos 60.

29. La forma de administración de una de las reivindicaciones 25 a 28, CARACTERIZADA PORQUE la cantidad de unidades diarias de hormona por fase de ingesta en la unidad de envasado correspondiente al último período de ingesta es de por lo menos 70.

30. La forma de administración de una de las reivindicaciones 25 a 29, CARACTERIZADA PORQUE la cantidad de unidades diarias de hormona por fase de ingesta en la unidad de envasado correspondiente al último período de ingesta es de por lo menos 80.

31. La forma de administración de una de las reivindicaciones 25 a 30, CARACTERIZADA PORQUE la cantidad de unidades diarias de hormona por fase de ingesta en la unidad de envasado correspondiente al último período de ingesta es de

por lo menos 90.

32. La forma de administración de una de las reivindicaciones 25 a 31, CARACTERIZADA PORQUE la cantidad de unidades diarias de hormona por fase de ingesta en la unidad de envasado correspondiente al último período de ingesta es de por lo menos 100.

33. La forma de administración de una de las reivindicaciones 25 a 32, CARACTERIZADA PORQUE la cantidad de unidades diarias de hormona por fase de ingesta en la unidad de envasado correspondiente al último período de ingesta es de por lo menos 110.

34. La forma de administración de una de las reivindicaciones 25 a 33, CARACTERIZADA PORQUE la cantidad de unidades diarias de hormona por fase de ingesta en la unidad de envasado correspondiente al último período de ingesta es de 150 como máximo.

35. La forma de administración acorde con una de las reivindicaciones 21 a 34, CARACTERIZADA PORQUE las unidades diarias de hormona contienen, en cada caso, 0,5 a 3 mg inclusive de acetato de clormadinona, 1 a 3 mg inclusive de acetato de ciproterona; 0,05 a 0,2 mg inclusive de desogestrel; 1 a 3 mg inclusive de dienogest; 0,035 a 0,1 mg inclusive de gestoden; 0,025 a 0,5 mg inclusive de levonogestrel; 0,25 a 3 mg inclusive de linestrenol; 75 a 200 mg inclusive de acetato de medroxiprogesterona; 0,175 a 1,5 mg inclusive

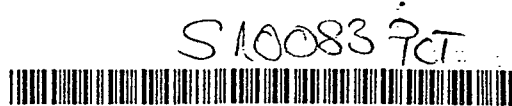
de noretisterona; 0,1 a 0,3 mg inclusive de norgestinato; 0,015 a 0,75 mg inclusive de norgestrel; 0,25 a 3 mg inclusive de acetato de norestisterona; 100 a 300 mg inclusive de enantato de norestisterona; 1,5 a 4 mg inclusive de drosperinona; 10 a 50 µg inclusive de etinilestradiol; 25 a 50 µg inclusive de mestranol y/o 0,25 a 6 mg inclusive de estradiol (como representante de un estrógeno natural).

36. La forma de administración acorde con una de las reivindicaciones 21 a 34, CARACTERIZADA PORQUE por lo menos una de las unidades de envasado correspondiente a una pausa entre ingestas contiene una cantidad de placebos correspondiente a la duración de la pausa entre ingestas particular.

37. La forma de administración acorde con una de las reivindicaciones 21 a 36, CARACTERIZADA PORQUE la dosificación del componente hormonal disminuye sucesivamente con los períodos de ingesta.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 March 2002 (21.03.2002)

PCT

(10) International Publication Number
WO 02/022110 A3

- (51) International Patent Classification⁷: A61K 45/06, 31/57, 31/565 // (A61K 31/565, 31:565)
- (21) International Application Number: PCT/EP01/10207
- (22) International Filing Date:
5 September 2001 (05.09.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
100 45 380.5 14 September 2000 (14.09.2000) DE
- (71) Applicant (for all designated States except US): SCHERING AKTIENGESELLSCHAFT [DE/DE]; Müllerstrasse 178, 13342 Berlin (DE).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): KULMANN, Hermann [DE/DE]; Dachsbau 78 A, 13503 Berlin (DE).
- (74) Agent: GODDAR, Heinz; Boehmert & Boehmert, Hollerallee 32, 28209 Bremen (DE).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report:
4 July 2002
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CONTRACEPTION PROCESS AND ADMINISTRATION FORM FOR THE SAME

(57) Abstract: Process for hormonal contraception, in which in a plurality of substantially time-unlimited, linked taking periods and optionally having a sequence lasting several years and which in each case comprise at least one taking cycle with a duration-constant taking phase lasting several days within the particular taking period and a taking pause lasting several days, in which taking phase or phases per day administration takes place of a daily unit with at least one contraceptively acting hormone component, such as estrogen and/or gestagen, and in the taking pause or pauses administration takes place either of placebos free from any hormone component or the particular taking pause remains entirely administration-free and the duration of the taking phase or phases of at least the final taking period last at least 22 days, characterized in that the duration of the taking phase or phases in any taking period preceding a following taking period is shorter than in each case following taking period, as well as administration form for hormonal contraception and in particular for the performance thereof.

WO 02/022110 A3

INTERNATIONAL SEARCH REPORT

Int'l Application No

PCT/EP 01/10207

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K45/06 A61K31/57 A61K31/565 //(A61K31/565,31:565)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, MEDLINE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 195 25 017 A (SCHERING AG) 2 January 1997 (1997-01-02) * Ex. 1-5; Claims 1-39 *	21-37 (D7)
X	WO 96 15794 A (BALANCE PHARMACEUTICALS INC) 30 May 1996 (1996-05-30) claims 1-12	21-37
Y	EP 0 911 029 A (HAMPTON ROADS MEDICAL COLLEGE) 28 April 1999 (1999-04-28) * p.3, 1.29-34; claims 1, 4 and 7 *	21-37
Y	DE 43 44 462 A (SCHERING AG) 29 June 1995 (1995-06-29) claims 1-12	21-37
	--- -/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

18 April 2002

Date of mailing of the international search report

07/05/2002

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Uiber, P

INTERNATIONAL SEARCH REPORT

Int. Patent Application No
PCT/EP 01/10207

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	SCHWARTZ ET AL: "The trimonthly combination oral contraceptive regimen: is it cost effective?" CONTRACEPTION, vol. 60, no. 5, 1999, pages 263-67, XP002196533 * abstract; Table 1; -----	21-37

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Present claims 21-37 relate to an extremely large number of possible administration forms. In fact, the claims contain so many options, variables, possible permutations and provisos, such as "taking phase", "neighbouring taking pause", "number of daily hormone units in any packaging unit corresponding to a taking period preceding a following taking period is smaller than in the packaging unit corresponding to the in each case following taking period", etc... that a lack of clarity (and/or conciseness) within the meaning of Article 6 PCT arises to such an extent as to render a meaningful search of the claims impossible. Consequently, the search has been carried out for those parts of the application which do appear to be clear (and/or concise), namely Examples 1-10

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 01/10207

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 19525017	A	02-01-1997	DE 19525017 A1	02-01-1997
			AU 6352896 A	30-01-1997
			BR 9609317 A	06-07-1999
			CA 2225724 A1	16-01-1997
			CZ 9704205 A3	18-03-1998
			WO 9701342 A1	16-01-1997
			EP 0835114 A1	15-04-1998
			HU 9900252 A2	28-05-1999
			JP 11508538 T	27-07-1999
			NO 976067 A	27-02-1998
			NZ 312081 A	29-04-1999
			SK 178097 A3	06-05-1998
			US 6312722 B1	06-11-2001
			US 6027749 A	22-02-2000
			ZA 9605547 A	27-01-1997
WO 9615794	A	30-05-1996	CA 2205897 A1	30-05-1996
			EP 0792152 A1	03-09-1997
			WO 9615794 A1	30-05-1996
			US 6225298 B1	01-05-2001
EP 0911029	A	28-04-1999	US 5898032 A	27-04-1999
			EP 0911029 A2	28-04-1999
			JP 11029481 A	02-02-1999
			NO 982815 A	28-12-1998
DE 4344462	A	29-06-1995	DE 4344462 A1	29-06-1995
			CA 2179728 A1	29-06-1995
			CN 1142185 A	05-02-1997
			CZ 9601861 A3	11-12-1996
			WO 9517194 A1	29-06-1995
			EP 0735883 A1	09-10-1996
			HU 74877 A2	28-02-1997
			JP 9506888 T	08-07-1997
			NO 962676 A	22-08-1996
			NZ 278058 A	23-12-1998
			PL 315168 A1	14-10-1996
			RU 2169567 C2	27-06-2001
			SK 83196 A3	05-02-1997
			US 5583129 A	10-12-1996
			US RE37564 E1	26-02-2002
			US 5824667 A	20-10-1998

PATENT COOPERATION TREATY

44
49

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT
OR THE DECLARATION

(PCT Rule 44.1)

To:

BOEHMERT & BOEHMERT
Attn. Goddar, Heinz
Hollerallee 32
28209 Bremen
GERMANY

Boehmerl & Boehmert
Bremen

Eing 06. MAI 2002

Frist

Date of mailing
(day/month/year)

07/05/2002

Applicant's or agent's file reference

S10083PCT(M)

FOR FURTHER ACTION

See paragraphs 1 and 4 below

International application No.

PCT/EP 01/10207

International filing date

(day/month/year)

05/09/2001

Applicant

SCHERING AKTIENGESELLSCHAFT

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

Within 19 months from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority

 European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Véronique Baillou

2349-8236

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference S10083PCT(M)	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/EP 01/ 10207	International filing date (day/month/year) 05/09/2001	(Earliest) Priority Date (day/month/year) 14/09/2000
Applicant SCHERING AKTIENGESELLSCHAFT		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing :
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

- ☐ as suggested by the applicant.
- ☐ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.
- ☒ None of the figures.

INTERNATIONAL SEARCH REPORT

48

International Application No
PCT/EP 01/10207

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K45/06 A61K31/57 A61K31/565 //(A61K31/565,31:565)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, MEDLINE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 195 25 017 A (SCHERING AG) 2 January 1997 (1997-01-02) * Ex. 1-5; Claims 1-39 *	21-37
X	WO 96 15794 A (BALANCE PHARMACEUTICALS INC) 30 May 1996 (1996-05-30) claims 1-12	21-37
Y	EP 0 911 029 A (HAMPTON ROADS MEDICAL COLLEGE) 28 April 1999 (1999-04-28) * p.3, l.29-34; claims 1, 4 and 7 *	21-37
Y	DE 43 44 462 A (SCHERING AG) 29 June 1995 (1995-06-29) claims 1-12	21-37
	--- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

* & * document member of the same patent family

Date of the actual completion of the international search

18 April 2002

Date of mailing of the international search report

07/05/2002

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Uiber, P

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 01/10207

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	SCHWARTZ ET AL: "The trimonthly combination oral contraceptive regimen: is it cost effective?" CONTRACEPTION, vol. 60, no. 5, 1999, pages 263-67, XP002196533 * abstract; Table 1; _____	21-37

FURTHER INFORMATION CONTINUED FROM PCT/SA/ 210

Continuation of Box I.2

Present claims 21-37 relate to an extremely large number of possible administration forms. In fact, the claims contain so many options, variables, possible permutations and provisos, such as "taking phase", "neighbouring taking pause", "number of daily hormone units in any packaging unit corresponding to a taking period preceding a following taking period is smaller than in the packaging unit corresponding to the in each case following taking period", etc... that a lack of clarity (and/or conciseness) within the meaning of Article 6 PCT arises to such an extent as to render a meaningful search of the claims impossible. Consequently, the search has been carried out for those parts of the application which do appear to be clear (and/or concise), namely Examples 1-10

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 01/10207

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

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

1. ☒ Claims Nos.: 1-20
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy 1-20
2. ☒ Claims Nos.: -
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

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

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

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

Remark on Protest

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

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 01/10207

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 19525017	A	02-01-1997	DE 19525017 A1	02-01-1997
			AU 6352896 A	30-01-1997
			BR 9609317 A	06-07-1999
			CA 2225724 A1	16-01-1997
			CZ 9704205 A3	18-03-1998
			WO 9701342 A1	16-01-1997
			EP 0835114 A1	15-04-1998
			HU 9900252 A2	28-05-1999
			JP 11508538 T	27-07-1999
			NO 976067 A	27-02-1998
			NZ 312081 A	29-04-1999
			SK 178097 A3	06-05-1998
			US 6312722 B1	06-11-2001
			US 6027749 A	22-02-2000
			ZA 9605547 A	27-01-1997
WO 9615794	A	30-05-1996	CA 2205897 A1	30-05-1996
			EP 0792152 A1	03-09-1997
			WO 9615794 A1	30-05-1996
			US 6225298 B1	01-05-2001
EP 0911029	A	28-04-1999	US 5898032 A	27-04-1999
			EP 0911029 A2	28-04-1999
			JP 11029481 A	02-02-1999
			NO 982815 A	28-12-1998
DE 4344462	A	29-06-1995	DE 4344462 A1	29-06-1995
			CA 2179728 A1	29-06-1995
			CN 1142185 A	05-02-1997
			CZ 9601861 A3	11-12-1996
			WO 9517194 A1	29-06-1995
			EP 0735883 A1	09-10-1996
			HU 74877 A2	28-02-1997
			JP 9506888 T	08-07-1997
			NO 962676 A	22-08-1996
			NZ 278058 A	23-12-1998
			PL 315168 A1	14-10-1996
			RU 2169567 C2	27-06-2001
			SK 83196 A3	05-02-1997
			US 5583129 A	10-12-1996
			US RE37564 E1	26-02-2002
			US 5824667 A	20-10-1998

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference S10083PCT(M)	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP01/10207	International filing date (day/month/year) 05/09/2001	Priority date (day/month/year) 14/09/2000
International Patent Classification (IPC) or national classification and IPC A61K45/06		
Applicant SCHERING AKTIENGESELLSCHAFT et al.		
1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 4 sheets, including this cover sheet. ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of sheets.		
3. This report contains indications relating to the following items: - I ☒ Basis of the report - II ☐ Priority - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability - IV ☐ Lack of unity of invention - V ☐ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement - VI ☐ Certain documents cited - VII ☐ Certain defects in the international application - VIII ☐ Certain observations on the international application		
Date of submission of the demand 12/10/2001	Date of completion of this report 27.12.2002	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Uiber, P Telephone No. +49 89 2399 8474	



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP01/10207

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-11 as originally filed

Claims, No.:

1-37 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

International application No. PCT/EP01/10207

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application.
- ☒ claims Nos. 1-37.

because:

- ☒ the said international application, or the said claims Nos. 1-20 relate to the following subject matter which does not require an international preliminary examination (*specify*):
see separate sheet
 - ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
 - ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
 - ☒ no international search report has been established for the said claims Nos. 21-37.
2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:
- ☐ the written form has not been furnished or does not comply with the standard.
 - ☐ the computer readable form has not been furnished or does not comply with the standard.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP01/10207

SECTION III

- 1). Claims 1-20 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. No search report has been carried out with respect to these claims. Consequently, no opinion will be formulated with respect to novelty, inventive step and industrial applicability of the subject-matter of these claims (Article 34(4)(a)(i) PCT).

- 2). The IPEA fully and totally agrees with the objection as to lack of clarity raised by the ISA for the reasons brought forward therein (see PCT form 210 attached to the Search Report (SR); Box I.2), against claims 21-37. Applicant's attention is particularly drawn to the last paragraph of said reasoning.
Accordingly, due to the ambiguous and unclear wording of these claims, the IPEA is not in a position to carry out an examination.

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

BOEHMERT & BOEHMERT	
Bremen	
Eing.:	30. Dez. 2002
position:	Sekretär
Verfügung:	
Frach:	

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

To:

GODDAR, Heinz
Boehmert & Boehmert
Hollerallee 32
28209 Bremen
ALLEMAGNE

Date of mailing (day/month/year)	27.12.2002
-------------------------------------	------------

Applicant's or agent's file reference S10083PCT(M)	IMPORTANT NOTIFICATION
---	------------------------

International application No. PCT/EP01/10207	International filing date (day/month/year) 05/09/2001	Priority date (day/month/year) 14/09/2000
---	--	--

Applicant SCHERING AKTIENGESELLSCHAFT et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

For the purpose of deciding whether the claimed invention is patentable or not, the elected Offices may apply criteria additional to or different from the criteria on which the international preliminary examination report is based (see Articles 27(5), 33(5)). Additional criteria may include e.g. exemptions from patentability and the requirements of enabling disclosure and of clarity and support of claims.

Name and mailing address of the IPEA/  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Ruiz Fernandez, J Tel. +49 89 2399-7960
--	--

