BASES DE DATOS GESTIONADAS POR LA OEPM

EJEMPLO DE BUSQUEDA

Vicepresidencia Adjunta de Transferencia de Conocimiento

Dr. Juan Martínez Armesto

Técnico de Protección del Conocimiento

ja.martinez@orgc.csic.es

ÍNDICE

- ➢ **CICLO DE VIDA DE UNA PATENTE**
- ➢ **TRAMITACION ANTE LA OEPM**
- ➢ **TRAMITACION ANTE LA EPO**
- ➢ **TRAMITACION PCT**

Ciclo de vida de una patente

1. Fecha de prioridad
2. Solicitud PCT o directa país a país
3. Publicación
4. Inicio fases nacionales
5. Concesión de patentes nacionales
6. Fin de la vida de la patente

0 meses | 12 meses | 18 meses | 30 meses | .... | 20 años

Año de prioridad

A partir de este momento **ya se puede publicar!**

Decisión de extensión **internacional!**

Decisión entrada en fases nacional si se ha hecho PCT **COSTES!**

(12) 特許協力条約に基づいて公開された国際出願

(19) 世界知的所有権機関
国際事務局

(43) 国際公開日
2007年6月21日 (21.06.2007)

PCT

(10) 国際公開番号
WO 2007/069666 A1

(51) 国際特許分類:
C12N 15/09 (2006.01) *C12N 5/06* (2006.01)
C07K 14/47 (2006.01)

(21) 国際出願番号: PCT/JP2006/324881

(22) 国際出願日: 2006年12月6日 (06.12.2006)

(25) 国際出願の言語: 日本語

(26) 国際公開の言語: 日本語

(30) 優先権データ:
特願2005-359537
2005年12月13日 (13.12.2005) JP

(71) 出願人 (米国を除く全ての指定国について): 国立大学法人京都大学 (KYOTO UNIVERSITY) [JP/JP]; 〒6068501 京都府京都市左京区吉田本町36番地1 Kyoto (JP).

(72) 発明者; および
(75) 発明者/出願人 (米国についてのみ): 山中伸弥 (YAMANAKA, Shinya) [JP/JP]; 〒6068507 京都府京都市左京区聖護院川原町53国立大学法人京都大学再生医科学研究所内 Kyoto (JP).

(74) 代理人: 特許業務法人特許事務所サイクス (SIKS & CO.); 〒1040031 東京都中央区京橋一丁目8番7号京橋日殖ビル8階 Tokyo (JP).

(81) 指定国 (表示のない限り、全ての種類の国内保護が可能): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) 指定国 (表示のない限り、全ての種類の広域保護が可能): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), ユーラシア (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), ヨーロッパ (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

添付公開書類:
— 国際調査報告書
請求の範囲の補正の期限前の公開であり、補正書受領の際には再公開される。

2文字コード及び他の略語については、定期発行される各*PCT*ガゼットの巻頭に掲載されている「コードと略語のガイダンスノート」を参照。

Datos de la solicitud:
Fecha de prioridad: 13/12/2005
Fecha de presentación internacional: 6/12/2006
Fecha de publicación: 21/6/2007
Fecha de publicación Cell: 20/11/2007

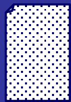
(54) Title: NUCLEAR REPROGRAMMING FACTOR

(54) 発明の名称: 核初期化因子

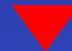
(57) Abstract: Disclosed is a means for inducing the reprogramming of a differentiated cell without using any embryo or ES cell and establish an inducible pluripotent stem cell having similar pluripotency and growing ability to those of an ES cell in a simple manner and with good reproductivity. As the means, a nuclear reprogramming factor for a somatic cell is provided, which comprise products of the following three genes: an Oct family gene; a Klf family gene; and an Myc family gene.

TRAMITACION DE SOLICITUDES DE PATENTE (OEPM)

Admisión a trámite



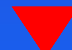
Solicitud de patente española



Examen de requerimientos formales

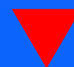
Inf. estado de la técnica + opinión

Publicación de la solicitud (15 – 18 meses)

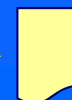


Examen de requisitos de patentabilidad (opcional)

Posible observaciones por terceros



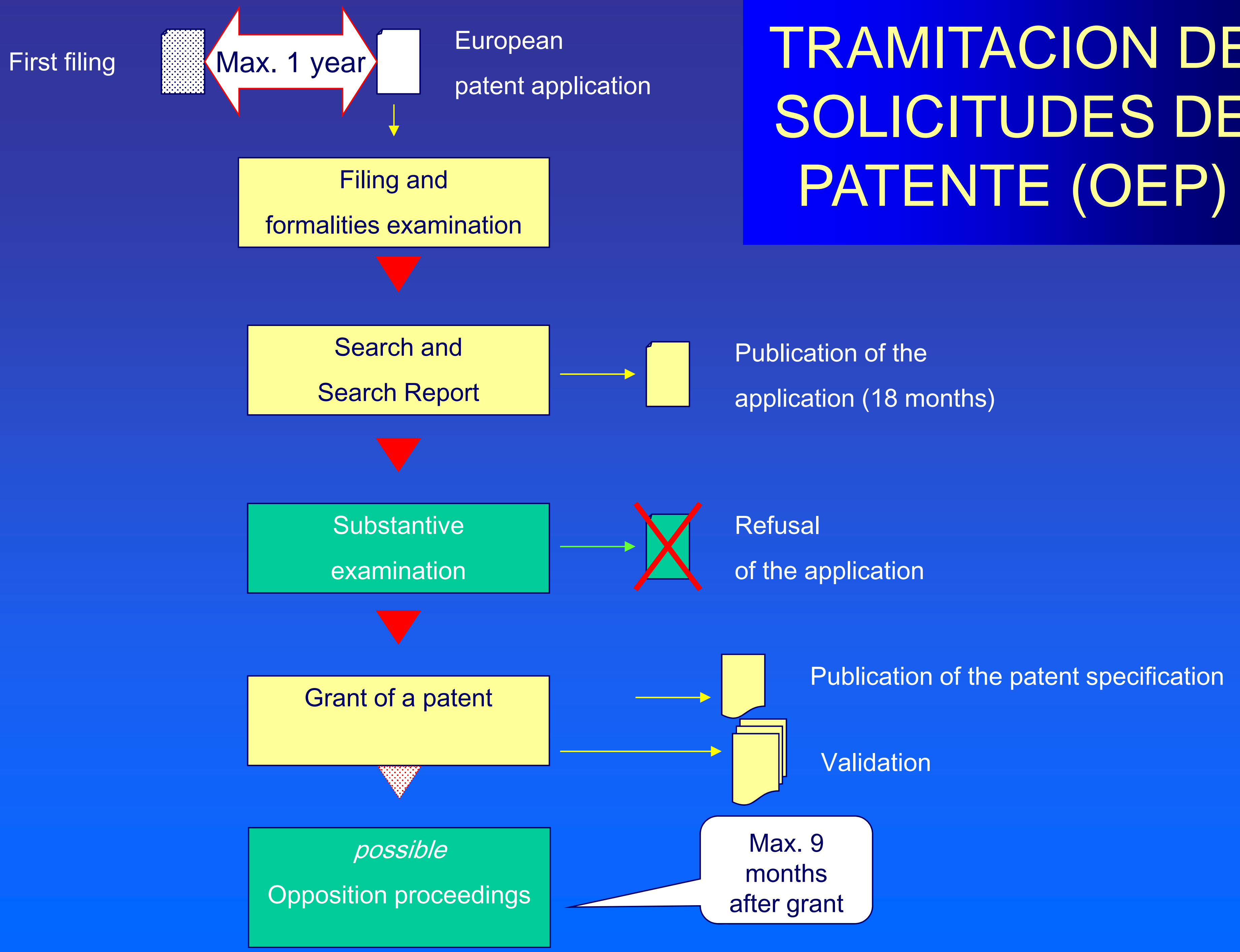
Concesión de la patente



Publicación del documento de patente

Derecho de prioridad

Este derecho significa que, en base a la fecha de una primera solicitud regular depositada en uno de los Estados contratantes del Convenio de París (175 países a 1 Enero 2014) , el solicitante dispone de un periodo de doce meses para solicitar protección en otros Estados contratantes.


TRAMITACION DE SOLICITUDES DE PATENTE (OEP)
First filing
Max. 1 year
European
patent application
Filing and
formalities examination
Search and
Search Report
Publication of the
application (18 months)
Substantive
examination
Refusal
of the application
Grant of a patent
Publication of the patent specification
Validation
possible
Opposition proceedings
Max. 9
months
after grant

(19)
Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 169 672 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication of patent specification: **13.05.92**

(51) Int. Cl.⁵: **C12N 15/85**, G01N 33/574, A01K 67/027

(21) Application number: **85304490.7**

(22) Date of filing: **24.06.85**

(54) **Method for producing transgenic animals.**

(30) Priority: **22.06.84 US 623774**

(43) Date of publication of application: **29.01.86 Bulletin 86/05**

(45) Publication of the grant of the patent: **13.05.92 Bulletin 92/20**

(84) Designated Contracting States: **AT BE CH DE FR GB IT LI LU NL SE**

(56) References cited:

SCIENCE, vol. 217, no. 4564, September 10, 1982 (Washington) T.A. STEWART et al. "Human b-Globin Gene Sequences Injected into Mouse Eggs, Retained in Adults, and Transmitted to Progeny" pages 1046-1048

NATURE, vol. 294, no. 5836, November 5, 1981 (London, New York) F. COSTANTINI et al. "Introduction of a rabbit b-globin gene into the mouse germ line" pages 92-94

(73) Proprietor: **THE PRESIDENT AND FELLOWS OF HARVARD COLLEGE**
17 Quincy Street
Cambridge, MA 02138(US)

(72) Inventor: **Leder, Philip**
25 Aston Road
Chestnut Hill Massachusetts 02167(US)
Inventor: **Stewart, Timothy A.**
3867 25th Street
San Francisco California 94114(US)

(74) Representative: **Bizley, Richard Edward et al**
HEPWORTH LAWRENCE BRYER & BIZLEY
2nd Floor Gate House South West Gate
Harlow, Essex CM20 1JN(GB)

Note: Within nine months from the publication of the mention of the grant of the European patent, any person may give notice to the European Patent Office of opposition to the European patent granted. Notice of opposition shall be filed in a written reasoned statement. It shall not be deemed to have been filed until the opposition fee has been paid (Art. 99(1) European patent convention).

Rank Xerox (UK) Business Services
(3.08/2.19/2.0)

To determine whether, in addition to the polymorphisms arising at the DNA level, the level of aberrant myc expression was also altered, heart mRNA was analyzed in eight animals derived from the mating of the above double heterozygote to a wild-type female. All eight exhibited elevated myc mRNA, with the amount appearing to vary between animals; the lower levels of expression segregated with the presence of the 12 Kb myc hybridizing band. The level of myc mRNA in the hearts of transgenic mice in a second backcross generation also varied. An F1 female was backcrossed to a C57Bl/6J male to produce a litter of seven pups, six of which inherited the RSV-S107 myc genes. All seven of these mice were analyzed for expression. Three of the six transgenic mice had elevated levels of myc mRNA in the hearts whereas in the other three the level of myc mRNA in the hearts was indistinguishable from the one mouse that did not carry the RSV-S107 myc gene. This result suggests that in addition to the one polymorphic RSV-S107 myc locus from which high levels of heart-restricted myc mRNA were transcribed, there may have been another segregating RSV-S107 myc locus that was transcriptionally silent.

Carcinogenicity Testing

The animals of the invention can be used to test a material suspected of being a carcinogen, as follows. If the animals are to be used to test materials thought to be only weakly carcinogenic, the transgenic mice most susceptible of developing tumors are selected, by exposing the mice to a low dosage of a known carcinogen and selecting those which first develop tumors. The selected animals and their descendants are used as test animals by exposing them to the material suspected of being a carcinogen and determining neoplastic growth as an indicator of carcinogenicity. Less sensitive animals are used to test more strongly carcinogenic materials. Animals of the desired sensitivity can be selected by varying the type and concentration of known carcinogen used in the selection process. When extreme sensitivity is desired, the selected test mice can consist of those which spontaneously develop tumors.

Testing for Cancer Protection

The animals of the invention can be used to test materials for the ability to confer protection against the development of neoplasms. An animal is treated with the material, in parallel with an untreated control transgenic animal. A comparatively lower incidence of neoplasm development in the treated animal is detected as an indication of protection.

Tissue Culture

The transgenic animals of the invention can be used as a source of cells for cell culture. Tissues of transgenic mice are analyzed for the presence of the activated oncogene, either by directly analyzing DNA or RNA, or by assaying the tissue for the protein expressed by the gene. Cells of tissues carrying the gene can be cultured, using standard tissue culture techniques, and used. e.g., to study the functioning of cells from normally difficult to culture tissues such as heart tissue.

Deposits

Plasmids bearing the fusion genes shown in Figs. 3, 4, 5, 6, and 8 have been deposited in the American Type Culture Collection, Rockville, MD, and given, respectively, ATCC Accession Nos. 39745 39746 , 39747 , 39748 , and 39749 .

Other embodiments are within the following claims. For example, any species of transgenic animal can be employed. In some circumstances, for instance, it may be desirable to use a species, e.g., a primate such as the rhesus monkey, which is evolutionarily closer to humans than mice.

Claims

1. A method for producing a transgenic non-human mammalian animal having an increased probability of developing neoplasms, said method comprising chromosomally incorporating an activated oncogene sequence into the genome of a non-human mammalian animal.

2. A method as claimed in claim 1 wherein the chromosome of the animal includes an endogenous coding sequence substantially the same as the coding sequence of the oncogene.

To determine whether, in addition to the polymorphisms arising at the DNA level, the level of aberrant myc expression was also altered, heart mRNA was analyzed in eight animals derived from the mating of the above double heterozygote to a wild-type female. All eight exhibited elevated myc mRNA, with the amount appearing to vary between animals; the lower levels of expression segregated with the presence of the 12 Kb myc hybridizing band. The level of myc mRNA in the hearts of transgenic mice in a second backcross generation also varied. An F1 female was backcrossed to a C57Bl/6J male to produce a litter of seven pups, six of which inherited the RSV-S107 myc genes. All seven of these mice were analyzed for expression. Three of the six transgenic mice had elevated levels of myc mRNA in the hearts whereas in the other three the level of myc mRNA in the hearts was indistinguishable from the one mouse that did not carry the RSV-S107 myc gene. This result suggests that in addition to the one polymorphic RSV-S107 myc locus from which high levels of heart-restricted myc mRNA were transcribed, there may have been another se[...] ing RSV-S107 myc locus that was transcriptionally silent.

Carci[...]

T[...]

If the[...] most[...] carci[...] used[...] neop[...] carci[...] conc[...] selec[...]

Testi[...]

[...] development of neoplasms. An animal is treated with the material, in parallel with an untreated control transgenic animal. A comparatively lower incidence of neoplasm development in the treated animal is detected as an indication of protection.

Tissue Culture

The transgenic animals of the invention can be used as a source of cells for cell culture. Tissues of transgenic mice are analyzed for the presence of the activated oncogene, either by directly analyzing DNA or RNA, or by assaying the tissue for the protein expressed by the gene. Cells of tissues carrying the gene can be cultured, using standard tissue culture techniques, and used, e.g., to study the functioning of cells from normal[...]

Deposits

Plasmid[...] American T[...] 39746 , 397[...]

Other e[...] be employed. In some circumstances, for instance, it may be desirable to use a species, e.g., a primate such as the rhesus monkey, which is evolutionarily closer to humans than mice.

Claims

1. A method for producing a transgenic non-human mammalian animal having an increased probability of developing neoplasms, said method comprising chromosomally incorporating an activated oncogene sequence into the genome of a non-human mammalian animal.

2. A method as claimed in claim 1 wherein the chromosome of the animal includes an endogenous coding sequence substantially the same as the coding sequence of the oncogene.

0169672

CLAIMS:

1. A method for producing a transgenic eucaryotic animal having an increased probability of developing neoplasms, said method comprising introducing into an animal embyro an activated oncogene sequence.

[...]med in claim 1 wherein the [...]ncludes an endogenous [...]lly the same as the coding

[...]med in claim 2 wherein said [...]rated into a chromosome of [...]erent from the location of said endogenous coding sequence.

4. A method as claimed in claim 2 or claim 3 wherein transcription of said oncogene sequence is under the control of a promoter sequence different from the promoter sequence controlling the

6. A method as claimed in any one of claims 1 to 4 wherein said activated oncogene sequence comprises a fused gene comprising an oncogene sequence fused to an activating viral or synthetic promotor sequence.

7. A method as claimed in claim 6 wherein said

1. A method for producing a transgenic eucaryotic animal having an increased probability of developing neoplasms, said method comprising introducing into an animal embyro an activated oncogene sequence.

1. A method for producing a transgenic non-human mammalian animal having an increased probability of developing neoplasms, said method comprising chromosomally incorporating an activated oncogene sequence into the genome of a non-human mammalian animal.

TRAMITACION DE SOLICITUDES DE PATENTE (PCT)

Documento de prioridad

Solicitud de patente PCT

Presentación con designación todo el PCT

Se puede hacer ante la OEPM y en español

Informe de búsqueda internacional + opinion de la búsqueda intern.

A los 9 meses desde la presentación o a los 3 si hay prioridad

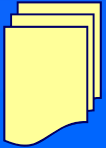
Publicación de la solicitud internacional (la opinion no)

Capítulo I del PCT

Capítulo II del PCT

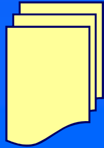
Examen preliminar internacional

A los 22 meses desde la fecha de prioridad (posibilidad de presentar modificaciones u observaciones)



La solicitud se remite a las oficinas nacionales y supranacionales.

(máx. 30 meses desde la prioridad)



PBS/1.0% FCS as a flushing medium prevents oocyte ac
vation. Oocytes can be enucleated in calcium free mediu
and donor cells introduced as above in the absence
activation. No organised spindle is observed, multiple nuc
are formed upon subsequent activation and this may
suppressed by nocodazole treatment.

Results

In preliminary experiments in sheep, a single pregnan
has resulted in the birth of a single live lamb. The results a
summarised in Tables 4 and 5.

Table 4 shows development of ovine embryos reco
structed by transfer of an embryo derived established c
line to unactivated enucleated in vivo matured ovi
oocytes. Oocytes were obtained from superstimulated Sc
tish blackface ewes, the cell line was established from t
embryonic disc of a day 9 embryo obtained from a We
mountain ewe. Reconstructed embryos were cultured in t
ligated oviduct of a temporary recipient ewe for 6 day
recovered and assessed for development.

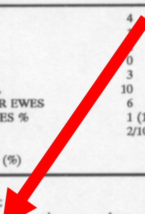
TABLE 4

DATE OF NUCLEAR TRANSFER	PASSAGE NUMBER	NUMBER OF MORULA, BLASTOCYSTS/ TOTAL NUMBER
17.1.95	6	4/28
19.1.95	7	1/10
31.1.95	13	0/2
2.2.95	13	0/1
7.2.95	11	1/9
9.2.95	11	1/2
14.2.95	12	
16.2.95	13	3/1
TOTAL		10/78 (

Table 5 shows induction of pregnancy follo
of all morula/blastocyst stage reconstructed en
uterine horn of synchronised final recipient bla
The table shows the total number of embryo
group transferred the frequency of pregnancy
ewes and embryos, in the majority of cases 2 e
transferred to each ewe. A single twin pre
established which resulted in the birth of a sing

TABLE 5

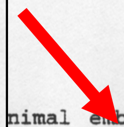
PASSAGE NUMBER	"MAGI
P6	4
P7	
P11	
P12	0
P13	3
TOTAL MOR/BL	10
TOTAL NUMBER EWES	6
PREGNANT EWES %	1 (16.
FOETUSES/ TOTAL TRANSFERRED (%)	2/10 (



What is claimed is:
1. A method of reconstructing an embryo of
mammal, comprising:
(a) transferring the nucleus of a diploid don
G0 phase of the cell cycle into an unactiv

25 6. A method of producing a non-human mammal, comprising:
(a) reconstructing an embryo according to the method of claim 1;
30 (b) transferring the embryo into a female mammal of the same species such that the embryo develops to term.

1. A method of reconstituting an animal embryo, the process comprising transferring a diploid nucleus into an oocyte which is arrested in the metaphase of the second meiotic division without concomitantly activating the oocyte, keeping the nucleus exposed to the cytoplasm of the recipient for a period of time sufficient for the embryo to become capable of giving rise to a live birth and subsequently activating the reconstituted embryo while maintaining correct ploidy.



nimal embryo, the
oid nucleus into an
hase of the second
ly activating the
the cytoplasm of
ufficient for the
se to a live birth
onstituted embryo
while maintaining correct ploidy.

2. A method as claimed in claim 1, in which the animal is an ungulate species.

imed in claim 2, in which the animal
pig, goat, sheep, camel or water

imed in any one of claims 1 to 3, in
eus is genetically modified.

aimed in any one of claims 1 to 4,
nucleus is donated by a quiescent

aimed in any one of claims 1 to 5,
t oocyte is enucleate.

aimed in any one of claims 1 to 6,
sfer is achieved by cell fusion.

aimed in any one of claims 1 to 7,
s a cow or bull and wherein the donor

What is claimed is:

1. A method of reconstructing an embryo of a non-human mammal, comprising:

(a) transferring the nucleus of a diploid donor cell in the G0 phase of the cell cycle into an unactivated, enucleated metaphase II oocyte, without concomitantly activating the oocyte so as to form a reconstructed embryo, wherein the donor cell and the oocyte are form the same non-human mammalian species;

(b) maintaining the reconstructed embryo without activation such that correct ploidy is maintained, wherein the reconstructed embryo subsequently can develop to term; and

(c) activating the reconstructed embryo under conditions that maintain correct ploidy.

PBS/1.0% FCS as a flushing medium prevents oocyte activation. Oocytes can be enucleated in calcium free medium and donor cells introduced as above in the absence of activation. No organised spindle is observed, multiple nuclei are formed upon subsequent activation and this may be suppressed by nocodazole treatment.

Results

In preliminary experiments in sheep, a single pregnancy has resulted in the birth of a single live lamb. The results are summarised in Tables 4 and 5.

Table 4 shows development of ovine embryos reconstructed by transfer of an embryo derived established cell line to unactivated enucleated in vivo matured ovine oocytes. Oocytes were obtained from superstimulated Scottish blackface ewes, the cell line was established from the embryonic disc of a day 9 embryo obtained from a Welsh mountain ewe. Reconstructed embryos were cultured in the ligated oviduct of a temporary recipient ewe for 6 days, recovered and assessed for development.

TABLE 4

DATE OF NUCLEAR TRANSFER	PASSAGE NUMBER	NUMBER OF MORULA, BLASTOCYSTS/ TOTAL NUMBER

The table shows the total number of embryos from each group transferred the frequency of pregnancy in terms of ewes and embryos, in the majority of cases 2 embryos were transferred to each ewe. A single twin pregnancy was established which resulted in the birth of a single live lamb.

TABLE 5

PASSAGE NUMBER	"MAGIC"
P6	4
P7	1
P11	2
P12	0
P13	3
TOTAL MOR/BL	10
TOTAL NUMBER EWES	6
PREGNANT EWES %	1 (16.7)
FOETUSES/ TOTAL TRANSFERRED (%)	2/10 (20.0)

What is claimed is:

1. A method of reconstructing an embryo of a non-human mammal, comprising:

(a) transferring the nucleus of a diploid donor cell in the G0 phase of the cell cycle into an unactivated, enucle-

ated metaphase II oocyte, without concomitantly activating the oocyte so as to form a reconstructed embryo, wherein the donor cell and the oocyte are form the same non-human mammalian species;

(b) maintaining the reconstructed embryo without activation such that correct ploidy is maintained, wherein the reconstructed embryo subsequently can develop to term; and

(c) activating the reconstructed embryo under conditions that maintain correct ploidy.

2. The method of claim 1 wherein maintaining correct ploidy is achieved by the presence of at least one microtubule inhibitor or stabilizer.

3. The method of clai wherein the non-human mammal is selected from the g up consisting of cows, sheep, pigs, mice, goats and rabb

4. The method of clai 1 wherein the donor cell is genetically modified.

5. The method of claim wherein transfer of the diploid donor cell nucleus into enu ated oocyte is achieved by cell fusion.

6. A method of produci a non-human mammal, comprising:

(a) reconstructing an em yo according to the method of

donor cell nucleus into enucleated oocyte is achieved by cell fusion.

11. A method of reconstructing an embryo of a non-human mammal comprising:

(a) transferring the nucleus of a donor diploid cell in the

sequently can develop to term; and

(c) activating and maintaining the reconstructed embryo in the presence of at least one microtubule stabilizer or inhibitor so as to maintain correct ploidy.

12. The method of claim 11 wherein the non-human mammal is selected from the group consisting of cows, sheep, pigs, mice, goats and rabbits.

13. The method of claim 11 wherein the donor cell is genetically modified.

3. The method of claim 1 wherein the non-human mammal is selected from the group consisting of cows, sheep, pigs, mice, goats and rabbits.

CLAIMS

1. A method of reconstituting an animal embryo, the process comprising transferring a diploid nucleus into an oocyte which is arrested in the metaphase of the second meiotic division without concomitantly activating the oocyte, keeping the nucleus exposed to the cytoplasm of the recipient for a period of time sufficient for the embryo to become capable of giving rise to a live birth and subsequently activating the reconstituted embryo while maintaining correct ploidy.

im 1, in which the animal

im 2, in which the animal , sheep, camel or water

one of cla ms 1 to 3, in which the donor nucleus is genetically mod fied.

5. A method as claimed in any one of c aims 1 to 4, cent

5,

7. A method as claimed in any one of claims 1 to 6, wherein nuclear transfer is achieved by cell fusion.

8. A method as claimed in any one of claims 1 to 7, wherein the animal is a cow or bull and wherein the donor

3. A method as claimed in claim 2, in which the animal is a cow or bull, pig, goat, sheep, camel or water buffalo.

La guerra de cápsulas de café: Nespresso vs. Marcilla

Articulo sobre la introducción en el mercado español por parte de **Marcilla** (marca de la multinacional **Sara Lee**) de las cápsulas **L'Arôme Espresso** compatibles con las cafeteras **Nespresso**. La cuestión es si hay alguna patente en vigor de cápsulas de café que pueda infringir Marcilla con la comercialización de sus cápsulas **L'Arôme Espresso.** En Francia hay una acción judicial en marcha y parece ser que una de las patentes relevantes es EP0512468 (validada en España como ES 2097831_T3).
http://www.elimparcial.es/noticia/83506/economia/Marcilla-declara-la-guerra-a-Nespresso-con-sus-nuevas-capsulas-de-cafe.html