

Señora Jefe
DIVISIÓN DE NUEVAS CREACIONES
SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
Bogotá, D.C.

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 07-096993- -00003-0000

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Tra. 11 PATENTEIYII Eve: 378 FASENACIONAL
Act 444 RESPUESTAREQUE Folios: 19

Re.: Expediente No. 07 96.993 Fase
Nacional Solicitud de Patente
PCT a nombre de SYNTHES GMBH
Código 011 - 378 - 444

En relación con la solicitud contenida en el expediente de la referencia y, en particular, para dar respuesta a su último requerimiento hecho dentro del mismo, dentro del término conferido, por medio del presente escrito me permito manifestarle:

1. Acompaño copia certificada del documento donde consta la cesión del derecho a la patente de los Inventores:

- Sean H. Kerr
- Stuart Weikel
- James W. Dwyer

a favor de la sociedad Synthes (U.S.A.), debidamente firmado, autenticado por Notario Público y legalizado por Apostilla.

2. Acompaño copia certificada del documento donde consta la cesión del derecho a la patente de la sociedad Synthes (U.S.A.) a favor de la sociedad solicitante Synthes GmbH, debidamente firmado, autenticado por Notario Público y legalizado por Apostilla.
3. Acompaño el texto en Inglés de las reivindicaciones adjuntas a la solicitud internacional PCT/US2006/006190, con su correspondiente traducción.

Le solicito se sirva agregar este escrito y sus anexos al expediente y continuar con el trámite de la solicitud.

De Usted Atentamente,

GERMAN CASTILLO GRAU
T.P. No 2.978 del C.S.J.

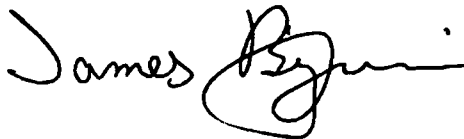
Apostille

(Convention de La Haye du 5 Octobre 1961)

1. Country: **United States of America**
- This public document
2. has been signed by **Norman Goodman**
3. acting in the capacity of **County Clerk**
4. bears the seal/stamp of the county of **New York**

Certified

5. At New York, New York 6. the 03rd day of December 2007
7. by Special Deputy Secretary of State, State of New York
8. No. NYC-10292988B
9. Seal/Stamp 10. Signature



James Bizzarri
Special Deputy Secretary of State

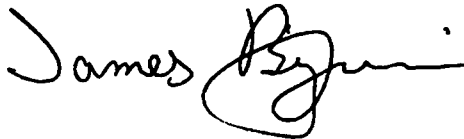
Apostille

(Convention de La Haye du 5 Octobre 1961)

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2. has been signed by **Norman Goodman**
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4. bears the seal/stamp of the county of **New York**

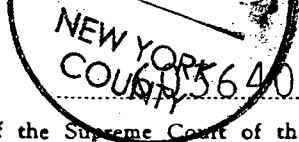
Certified

5. At New York, New York 6. the 03rd day of December 2007
7. by Special Deputy Secretary of State, State of New York
8. No. NYC-10292988B
9. Seal/Stamp 10. Signature



James Bizzarri
Special Deputy Secretary of State

State of New York
County of New York, } ss.:



Form 1

I, NORMAN GOODMAN, County Clerk and Clerk of the Supreme Court of the State of New York, in and for the County of New York, a Court of Record, having by law a seal,
DO HEREBY CERTIFY pursuant to the Executive Law of the State of New York, that

Amelia Fisher

whose name is subscribed to the annexed affidavit, deposition, certificate of acknowledgment or proof, was at the time of taking the same a NOTARY PUBLIC in and for the State of New York duly commissioned, sworn and qualified to act as such; that pursuant to law, a commission or a certificate of his official character, with his autograph signature has been filed in my office; that at the time of taking such proof, acknowledgment or oath, he was duly authorized to take the same; that I am well acquainted with the handwriting of such NOTARY PUBLIC or have compared the signature on the annexed instrument with his autograph signature deposited in my office, and I believe that such signature is genuine.

IN WITNESS WHEREOF, I have hereunto set my hand affixed my official seal this

NOV 21 2007

FEE PAID \$3.00

Norman Goodman

County Clerk and Clerk of the Supreme Court, New York County

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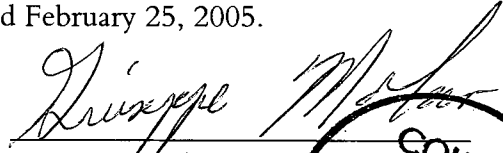
VERIFICATION

STATE OF NEW YORK)
) ss.:
COUNTY OF NEW YORK)

I verify that the attached two (2) documents identified as:

Assignment

which cover corresponding foreign rights, are true copies of the documents executed on January 10, 2006 by **Sean H. Kerr**, executed on January 17, 2006 by **Stuart Weikel** and executed on January 12, 2006 by James W. Dwyer to **Synthes (USA)**, a company located in the United States, in connection with U.S. Serial No. 11/067,438, filed February 25, 2005.


Giuseppe Molaro


Subscribed and sworn to before me this 13th day of November 2007.


Notary Public

ANGELA FISHER
Notary Public, State of New York
No. 31-4939107
Qualified in New York County
Commission Expires July 25, 20 10

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A

ASSIGNMENT

WHEREAS, WE, Sean H. Kerr, residing at 22 Briar Road, Oreland, PA 19075; Stuart Weikel, residing at 2500 Hillcrest Road, Drexel Hill, PA 19026; and James W. Dwyer, residing at 831 Pineridge Road, West Chester, PA 19380, ASSIGNORS, citizens of the United States, are the inventors of the inventions described, disclosed and/or claimed in (RESORBABLE CONTAINMENT DEVICE AND PROCESS FOR MAKING AND USING SAME) (hereinafter "the Invention") and for which we have executed an application for a Patent of the United States having application Serial No. 11/067,438, filed on February 25, 2005 and which is identified by Jones Day Docket No. 8932-713-999.

AND WHEREAS, SYNTHES (USA), ASSIGNEE, is a Partnership organized under the laws of the Commonwealth of Pennsylvania and having a place of business at 1302 Wrights Lane East, West Chester, PA 19380, is desirous of obtaining my/our entire right, title and interest in, to and under all the inventions disclosed, described and/or claimed in the above-identified application:

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, my/our entire right, title and interest in, to and under all the said inventions, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said inventions in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for all the said inventions in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner for Patents and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to me/us respecting said inventions, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said inventions in all countries.

IN TESTIMONY WHEREOF, I/we hereunto set my/our hand(s) and seal(s) the day and year set opposite my/our respective signatures.

Date JANUARY 10, 2006

Sean H. Kerr
Sean H. Kerr

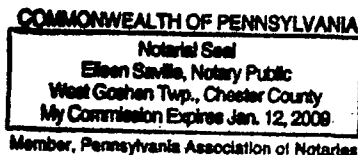
L.S.

Commonwealth of PA
State of)
County of Chester) SS.:

On JANUARY 10, 2006, before me, Eileen Saville, Notary Public, personally appeared Sean H. Kerr, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

Eileen Saville



Date _____ L.S.
Stuart Weikel

State of _____)
County of _____) SS.:

On _____, before me, _____ Notary Public, personally appeared Stuart Weikel, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

Date 1/12/06 _____ L.S.
James W. Dwyer

Commonwealth of PA
State of _____)
County of Chester) SS.:

On JANUARY 12, 2006, before me, Eileen Saville Notary Public, personally appeared James W. Dwyer, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

Eileen Saville

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Eileen Saville, Notary Public
West Goshen Twp., Chester County
My Commission Expires Jan. 12, 2009
Member, Pennsylvania Association of Notaries

ASSIGNMENT

9206 Rolling Oaks Trail,
Austin, TX 78750

WHEREAS, WE, Sean H. Kerr, residing at 22 Briar Road, Oreland, PA 19075; Stuart Weikel, residing at 2560 Hillcrest Road, Drexel Hill, PA 19026; and James W. Dwyer, residing at 831 Pineridge Road, West Chester, PA 19380, ASSIGNORS, citizens of the United States, are the inventors of the inventions described, disclosed and/or claimed in (RESORBABLE CONTAINMENT DEVICE AND PROCESS FOR MAKING AND USING SAME) (hereinafter "the Invention") and for which we have executed an application for a Patent of the United States having application Serial No. 11/067,438, filed on February 25, 2005 and which is identified by Jones Day Docket No. 8932-713-999.

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1/17/06

AND WHEREAS, SYNTHES (USA), ASSIGNEE, is a Partnership organized under the laws of the Commonwealth of Pennsylvania and having a place of business at 1302 Wrights Lane East, West Chester, PA 19380, is desirous of obtaining my/our entire right, title and interest in, to and under all the inventions disclosed, described and/or claimed in the above-identified application:

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, my/our entire right, title and interest in, to and under all the said inventions, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said inventions in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for all the said inventions in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner for Patents and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to me/us respecting said inventions, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said inventions in all countries.

IN TESTIMONY WHEREOF, I/We hereunto set my/our hand(s) and seal(s) the day and year set opposite my/our respective signatures.

Date _____ Sean H. Kerr _____ L.S.

State of _____)
County of _____) SS.:

On _____, before me, _____, Notary Public, personally appeared Sean H. Kerr, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

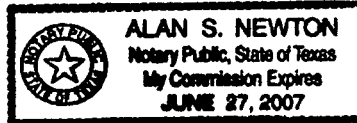
Date 1/17/06

Stuart Weikel L.S.
Stuart Weikel

State of TX)
County of TRAVIS) SS:

On 1-17-06, before me, Alan Newton Notary Public, personally appeared Stuart Weikel, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal



Date _____

James W. Dwyer

L.S.

State of _____)
County of _____) SS:

On _____, before me, _____ Notary Public, personally appeared James W. Dwyer, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

Apostille

(Convention de La Haye du 5 Octobre 1961)

1. Country: **United States of America**

This public document

2. has been signed by **Norman Goodman**

3. acting in the capacity of **County Clerk**

4. bears the seal/stamp of the county of **New York**

Certified

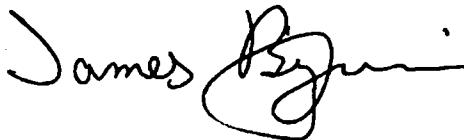
5. At New York, New York 6. the 03rd day of December 2007

7. by Special Deputy Secretary of State, State of New York

8. No. NYC-10292989B

9. Seal/Stamp

10. Signature



James Bizzarri

Special Deputy Secretary of State

State of New York
County of New York, } ss.:

NEW YORK
COUNTY

603638

Form 1

I, NORMAN GOODMAN, County Clerk and Clerk of the Supreme Court of the State of New York, in and for the County of New York, a Court of Record, having by law a seal,

DO HEREBY CERTIFY pursuant to the Executive Law of the State of New York, that

Angela Fisher

whose name is subscribed to the annexed affidavit, deposition, certificate of acknowledgment or proof, was at the time of taking the same a NOTARY PUBLIC in and for the State of New York duly commissioned, sworn and qualified to act as such; that pursuant to law, a commission or a certificate of his official character, with his autograph signature has been filed in my office; that at the time of taking such proof, acknowledgment or oath, he was duly authorized to take the same; that I am well acquainted with the handwriting of such NOTARY PUBLIC or have compared the signature on the annexed instrument with his autograph signature deposited in my office, and I believe that such signature is genuine.

IN WITNESS WHEREOF, I have hereunto set my hand affixed my official seal this

NOV 21 2007

FEE PAID \$3.00

Norman Goodman

County Clerk and Clerk of the Supreme Court, New York County

094

VERIFICATION

STATE OF NEW YORK)
) ss.:
COUNTY OF NEW YORK)

I verify that the attached document identified as:

Assignment

which covers corresponding foreign rights, is a true copy of the document executed on June 22, 2006 from **Synthes (USA)** to **Synthes GmbH** and **HFSC Company** in connection with U.S. Serial No. 11/067,438, filed February 25, 2005.

Giuseppe Molaro

COUNTY CLERK
Giuseppe Molaro

Subscribed and sworn to before me this 13th day of November 2007.

Angela Fisher

Notary Public

ANGELA FISHER
Notary Public, State of New York
No. 31-4939107
Qualified in New York County
Commission Expires July 25, 20 10

40 95

ASSIGNMENT

WHEREAS, **Synthes (USA)**, ASSIGNOR, a Partnership organized under the laws of the Commonwealth of Pennsylvania and having a place of business at 1302 Wrights Lane East, West Chester, PA 19380, has all right, title and interest in United States Patent Application Ser. No. 11/067,438, which was filed with the United States Patent and Trademark Office on February 25, 2005 entitled **RESORBABLE CONTAINMENT DEVICE AND PROCESS FOR MAKING AND USING SAME** and all inventions described, disclosed or claimed therein (hereinafter "the Invention");

AND WHEREAS, **Synthes GmbH**, ASSIGNEE, having a place of business at Eimattstrasse 3, 4436 Oberdorf, Switzerland, is desirous of obtaining the entire right, title and interest to and under the Invention, including the right to bring an action and recover damages for past infringements, if any, in all geographic locations except the United States and its possessions and territories, Canada and its possessions and territories, the Bahamas, and Bermuda (hereinafter "the Excluded Geographic Locations");

AND WHEREAS, **HFSC Company**, ASSIGNEE, a Partnership organized under the laws of the Commonwealth of Pennsylvania and having a place of business at 1302 Wrights Lane East, West Chester, PA 19380, is desirous of obtaining the entire right, title and interest to the Invention, including the right to bring an action and recover damages for past infringement, if any, in the Excluded Geographic Locations;

AND WHEREAS, ASSIGNOR, is desirous of assigning its entire right, title and interest to the Invention to the ASSIGNEES, including the right to bring an action and recover damages for past infringement, if any;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the said ASSIGNOR, has sold, assigned, transferred and set over, and does hereby sell, assign, transfer and set over, unto the said ASSIGNEES, their successors, legal representatives and assigns, all ASSIGNOR'S rights, title and interest in the Invention including the right to bring an action and recover damages for past infringement, if any; and all rights, title and interest in any corresponding patent applications and all divisions, renewals and continuations thereof, and all Patents which may be granted thereon and all reissues and extensions thereof; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said Invention in any country, and all extensions, renewals and reissues thereof;

NOW, THEREFORE, **Synthes GmbH** shall obtain all said rights, title and interest in the Invention in all geographic regions except the Excluded Geographic Locations; and **HFSC Company** shall obtain all said rights, title, and interest in the Invention in the Excluded Geographic Locations;

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AND ASSIGNOR HEREBY covenants and agrees that it has not executed, and will not execute, any agreement in conflict herewith.

AND ASSIGNOR HEREBY further covenants and agrees that it will communicate to the said ASSIGNEES, their successors, legal representatives and assigns, any facts known to it respecting said Invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEES, their successors, legal representatives and assigns, to obtain and enforce proper protection for said Invention.

AND ASSIGNOR HEREBY further covenants and agrees that it has read this Assignment, knows and understands its contents, and comprehends and agrees to all of its terms, conditions and meanings and their significance.

IN TESTIMONY WHEREOF, the person executing this Assignment in a representative capacity on behalf of the ASSIGNOR warrants that he/she is fully authorized and empowered to do so and sets his/her hand and seal the day and year set with his/her signature.

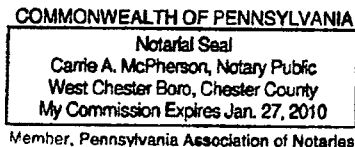
ASSIGNOR: Synthes (USA)
Robert M. Rauker Authorized to sign on behalf of Synthes (USA)
Signature: Robert M Rauker
Position/Title: Chief Patent Counsel
Address: 1302 Wrights Lane East
 West Chester, Pennsylvania 19380
Date: June 22, 2006

~~State of Commonwealth~~)
 of PA) SS.:
County of Chester)

On June 22, 2006, before me, Carrie A. McPherson, Notary Public, personally appeared Robert M. Rauker, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

Carrie A. McPherson



ASSIGNEE: Synthes GmbH

Robert M. Rauker

Authorized to sign on behalf of Synthes GmbH

Signature:

Robert M Rauker

Position/Title:

Chief Patent Counsel

Address:

1302 Wrights Lane East

West Chester, Pennsylvania 19380

Date:

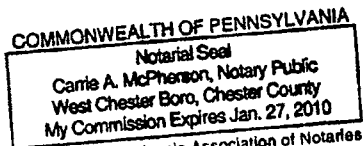
June 22, 2006

State of ~~Commonwealth~~
of PA) SS.:
County of ~~Chester~~)

On June 22, 2006, before me, Carrie A. McPherson Notary Public, personally appeared Robert M. Rauker, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

Carrie A. McPherson



ASSIGNEE:

HFSC Company

Robert M. Rauker

Authorized to sign on behalf of HFSC Company

Signature:

Robert M Rauker

Position/Title:

Chief Patent Counsel

Address:

1302 Wrights Lane East

West Chester, Pennsylvania 19380

Date:

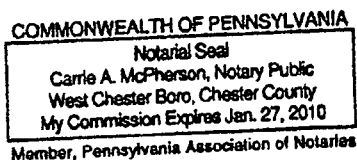
June 22, 2006

State of ~~Commonwealth~~
of PA) SS.:
County of ~~Chester~~)

On June 22, 2006, before me, Carrie A. McPherson, Notary Public, personally appeared Robert M. Rauker, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

Carrie A. McPherson



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What is claimed is:

1 1. A device for containing material inside bone comprising:
2 a barrier member configured and adapted for insertion into bone, the barrier member
3 having inner and outer surfaces, the inner surface defining a space,
4 wherein the barrier member is capable of preventing fluid within the space from
5 passing through the inner surface to the outer surface, and the barrier member comprises a
6 polyurethane polymer based on at least one of the group consisting of capralactone and
7 Pluronic, such that the barrier member is capable of degrading into biologically compatible
8 substances in vivo.

1 2. The device of claim 1, wherein the flexible material comprises a plasticizer.

1 3. The device of claim 2, wherein the flexible material is a resorbable material.

1 4. The device of claim 3, wherein the flexible material has high elongation.

1 5. The device of claim 1, wherein the flexible material has an elongation at
2 break of between about 1,000-percent and about 2,000-percent.

1 6. The device of claim 1, wherein the flexible material has a Young's modulus
2 between about 10 MPa and about 100 MPa.

1 7. The device of claim 1, wherein the flexible material has a tensile strength at
2 break between about 5 to about 100 MPa.

1 8. The device of claim 1, wherein the barrier member comprises a plurality of
2 layers.

1 9. The device of claim 8, wherein the barrier member has a tensile strength
2 between about 15 and about 50 MPa.

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1 10. The device of claim 9, wherein the barrier member has a tensile strength
2 between about 25 MPa and about 35 MPa.

1 11. The device of claim 8, wherein the barrier member has a Young's modulus
2 of between about 5 MPa and about 30 MPa.

1 12. The device of claim 11, wherein the barrier member has a Young's modulus
2 of between about 15 MPa and about 25 MPa.

1 13. The device of claim 11, wherein the barrier member has an elongation at
2 break of between about 600-percent and 1000-percent.

1 14. The device of claim 13, wherein the barrier member has an elongation at
2 break of between about 850-percent and 950-percent.

1 15. The device of claim 13, wherein the barrier member has an average
2 molecular weight of between about 100,000 and about 200,000 dalton.

1 16. The device of claim 15, wherein the barrier member has an average
2 molecular weight of between about 150,000 and about 190,000 dalton.

1 17. The device of claim 1, wherein the barrier member has mass and the mass
2 degrades *in vivo* after the device is implanted into bone.

1 18. The device of claim 17, wherein more than about 60-percent of the mass
2 degrades after about 2 weeks of *in vivo* degradation.

1 19. The device of claim 18, wherein the barrier member has a thickness of about
2 0.5 mm.

1 20. The device of claim 19, wherein the mass degrades *in vivo* to produce carbon
2 dioxide, water and diamine.

10/2006

1 21. A method of forming a resorbable containment device comprising:
2 providing a mold;
3 providing a polymer;
4 depositing a plurality of layers of the polymer on the mold to form the
5 resorbable containment device; and
6 removing the resorbable containment device from the mold.

1 22. The method of claim 21 further comprising treating the mold with at least
2 one lubricating material to provide a lubricating barrier for facilitating removal of the
3 resorbable containment device from the mold.

1 23. The method of claim 22 further comprising spraying the mold with the at
2 least one lubricating material.

1 24. The method of claim 22 further comprising dip coating the mold in at least
2 one lubricating material.

1 25. The method of claim 21 further comprising positioning at least one strand on
2 the mold.

1 26. The method of claim 25 further comprising forming a woven member with
2 the at least one strand.

1 27. The method of claim 21 further comprising positioning at least one strand on
2 one of a partially and completely formed resorbable containment device.

1 28. The method of claim 21 further comprising:
2 positioning at least one strand on a partially formed resorbable containment device;
3 and
4 depositing additional polymer over the at least one strand.

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1 29. The method of claim 21 further comprising forming the mold of stainless
2 steel and polishing the stainless steel.

1 30. The method of claim 21 further comprising forming the mold of PTFE.

1 31. The method of claim 21, wherein the step of depositing a plurality of layers
2 of the polymer on the mold comprises solution casting.

Lo que se reivindica es:

1. Un dispositivo para contener material dentro del hueso que comprende:
un elemento de barrera configurado y adaptado para ser insertado dentro del hueso, el cual elemento de barrera tiene superficies interna y externa, la cual superficie interna define un espacio,
en donde el elemento de barrera es capaz de impedir que el fluido que está dentro del espacio pase a través de la superficie interna hasta la superficie externa, y el elemento de barrera comprende un polímero de poliuretano basado en por lo menos uno de entre el grupo compuesto por capralactone y Pluronic, de manera que el elemento de barrera es capaz de degradarse en sustancias biológicamente compatibles *in vivo*.
2. El dispositivo de la reivindicación 1, en donde el material flexible comprende un plastificante.
3. El dispositivo de la reivindicación 2, en donde el material flexible es un material reabsorbible.
4. El dispositivo de la reivindicación 3, en donde el material flexible tiene alta elongación.
5. El dispositivo de la reivindicación 1, en donde el material flexible tiene una elongación en la ruptura de entre cerca de 1.000 por ciento y cerca de 2.000 por ciento.
6. El dispositivo de la reivindicación 1, en donde el material flexible tiene un módulo de Young entre cerca de 10 MPa y cerca de 100 MPa.
7. El dispositivo de la reivindicación 1, en donde el material flexible tiene una resistencia a la tensión en el momento de la ruptura entre cerca de 5 y cerca de 100 MPa.
8. El dispositivo de la reivindicación 1, en donde el elemento de barrera comprende una pluralidad de capas.
9. El dispositivo de la reivindicación 8, en donde el elemento de barrera tiene una resistencia a la tensión entre cerca de 15 y cerca de 50 MPa.
10. El dispositivo de la reivindicación 9, en donde el elemento de barrera tiene una resistencia a la tensión entre cerca de 25 MPa y cerca de 35 MPa.
11. El dispositivo de la reivindicación 8, en donde el elemento de barrera tiene un módulo de Young de entre cerca de 5 MPa y cerca de 30 MPa.
12. El dispositivo de la reivindicación 11, en donde el elemento de barrera tiene un módulo de Young de entre cerca de 15 MPa y cerca de 25 MPa.

13. El dispositivo de la reivindicación 11, en donde el elemento de barrera tiene una elongación en el momento de la ruptura de entre cerca de 600 por ciento y 1000 por ciento.
14. El dispositivo de la reivindicación 13, en donde el elemento de barrera tiene una elongación en el momento de la ruptura de entre cerca de 850 por ciento y 950 por ciento.
15. El dispositivo de la reivindicación 13, en donde el elemento de barrera tiene un peso molecular promedio de entre cerca de 100.000 y cerca de 200.000 daltons.
16. El dispositivo de la reivindicación 15, en donde el elemento de barrera tiene un peso molecular promedio de entre cerca de 150.000 y cerca de 190.000 daltons.
17. El dispositivo de la reivindicación 1, en donde el elemento de barrera tiene masa y la masa se degrada *in vivo* después de que el dispositivo ha sido implantado en el hueso.
18. El dispositivo de la reivindicación 17, en donde más de cerca de 60 por ciento de la masa se degrada después de cerca de 2 semanas de degradación *in vivo*.
19. El dispositivo de la reivindicación 18, en donde el elemento de barrera tiene un espesor de cerca de 0,5 mm.
20. El dispositivo de la reivindicación 19, en donde la masa se degrada *in vivo* produciendo bióxido de carbono, agua y diamina.
21. Un método para formar un dispositivo de contención reabsorbible que comprende:
 - proporcionar un molde;
 - proporcionar un polímero;
 - depositar una pluralidad de capas del polímero sobre el molde para formar el dispositivo de contención reabsorbible; y
 - extraer el dispositivo de contención reabsorbible del molde.
22. El método de la reivindicación 21 que además comprende tratar el molde con por lo menos un material lubricante para proporcionar una barrera lubricante para facilitar la extracción del dispositivo de contención reabsorbible del molde.
23. El método de la reivindicación 22 que además comprende rociar el molde con el por lo menos un material lubricante.
24. El método de la reivindicación 22 que además comprende recubrir el molde por inmersión en por lo menos un material lubricante.
25. El método de la reivindicación 21 que además comprende disponer por lo menos un filamento sobre el molde.
26. El método de la reivindicación 25 que además comprende formar un elemento tejido con el por lo menos un filamento.

27. El método de la reivindicación 21 que además comprende disponer por lo menos un filamento sobre uno de un dispositivo de contención reabsorbible parcial o completamente formado.
28. El método de la reivindicación 21 que además comprende:
disponer por lo menos un filamento sobre un dispositivo de contención reabsorbible parcialmente formado; y
depositar polímero adicional sobre el por lo menos un filamento.
29. El método de la reivindicación 21 que además comprende formar el molde de acero inoxidable y pulimentar el acero inoxidable.
30. El método de la reivindicación 21 que además comprende formar el molde de PTFE.
31. El método de la reivindicación 21, en donde la etapa de depositar una pluralidad de capas del polímero sobre el molde comprende vaciado de solución.

REPUBLICA DE COLOMBIA
SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

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2020
Bogotá D.C.,

Doctor(a)
CASTILLO GRAU GERMAN
Apoderado(a) y/o Representante de
SYNTHESE GMBH

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	Trámite	11
	Evento	378
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	Oficio No.	5585
	Folios	1

Teniendo en cuenta que la solicitud de privilegio de patente que se tramita bajo el expediente indicado en la referencia, reúne los requisitos de forma establecidos en la Decisión 486 de la Comisión de la Comunidad Andina, el Tratado de Cooperación en Materia de Patentes (PCT), el Reglamento y la Circular Única de la Superintendencia de Industria y Comercio, se envía el extracto de la solicitud a la Oficina de Comunicaciones para efecto de su publicación en la Gaceta de Propiedad Industrial.

Cúmplase
Dado en Bogotá DC,

27 FEB. 2008

ALIX CARMENZA CESPEDES DE VERGEL
Jefe de la división de Nuevas Creaciones

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