



11-21-2001



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PATENT

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Document ID #
☐ Correction of PTO Error
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Conveyance Type

- ☒ Assignment ☐ Security Agreement
☐ License ☐ Change of Name
☐ Merger ☐ Other

U.S. Government

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- ☐ Departmental File ☐ Secret File

Conveying Party(ies)

☒ Mark if additional names of conveying parties attached

Name (line 1) Nigel D.

Execution Date
Month Day Year
10 19 2001

Name (line 2) ATHERTON

Second Party

Name (line 1) Joseph W.

Execution Date
Month Day Year
10 19 2001

Name (line 2) TOTTEN

Receiving Party

☐ Mark if additional names of receiving parties attached

Name (line 1) Shire Holdings AG

Name (line 2)

Address (line 1) Bunderstrasse 5

Address (line 2)

Address (line 3) ZUG

SWITZERLAND

6300

City

State/Country

Zip Code

☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

Domestic Representative Name and Address

Enter for the first Receiving Party only.

Name Millen, White, Zelano & Branigan, P.C.

Address (line 1) 2200 Clarendon Boulevard

Address (line 2) Suite 1400

Address (line 3) Arlington, VA 22201

Address (line 4)

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11/20/2001 BRYNE 00000044 09891206

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40.00 UP

Correspondent Name and Address

Area Code and Telephone Number

(703) 243-6333

Name Millen, White, Zelano & Branigan, P.C.

Address (line 1) 2200 Clarendon Boulevard

Address (line 2) Suite 1400

Address (line 3) Arlington, VA 22201

Address (line 4)

Pages

Enter the total number of pages of the attached conveyance document including any attachments

5

Application Number(s) or Patent Number(s)

☐ Mark if additional numbers attached.

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)

09/891,206

If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor.

Month Day Year

Patent Cooperation Treaty (PCT)

Enter PCT application number only if a U.S. Application Number has not been assigned.

PCT

PCT

PCT

PCT

PCT

PCT

Number of Properties

Enter the total number of properties involved.

1

Fee Amount

Fee Amount for Properties Listed (37 CFR 3.41):

\$ 40.00

Method of Payment:

Enclosed ☒

Deposit Account ☐

Deposit Account

Enter for payment by deposit account or if additional fees can be charged to the account.)

Deposit Account Number:

13-3402

Authorization to charge additional fees:

Yes ☒

No ☐

Statement and Signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.

Anthony J. Zelano

Name of Person Signing

Signature

November 16, 2001

Date

RECORDATION FORM COVER SHEET
CONTINUATION
PATENTS ONLY

U.S. Department of Commerce
Patent and Trademark Office
PATENT

Conveying Party(ies)

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Enter additional Conveying Parties

Name (line 1) Michael D.

Execution Date
Month Day Year
11 05 2001

Name (line 2) GAITONDE

Execution Date
Month Day Year

Name (line 1)

Execution Date
Month Day Year

Name (line 2)

Execution Date
Month Day Year

Name (line 1)

Execution Date
Month Day Year

Name (line 2)

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☐ Mark if additional names of receiving parties attached

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Name (line 1)

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Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3)

City

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Name (line 1)

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Zip Code

Application Number(s) or Patent Number(s)

☐ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)

ASSIGNMENT

ATTY. DOCKET NO.: PHARMA-131

WHEREAS the below named inventor (if only one inventor is named below) or inventors (if plural inventors are named below) hereinafter referred to as the ASSIGNOR invented a certain improvement(s) relating to

TREATMENT OF BONE DISEASES

- ☐ for which an application for Letters Patent to be filed in the United States Patent and Trademark Office was executed on even date.
- ☒ for which U.S. Application Serial No. 09/891,206 for Letters Patent was filed in the U.S. Patent and Trademark Office on June 26, 2001
- ☐ for which an International Application was filed on _____ as _____, designating the United States.

AND WHEREAS

Shire Holdings AG
Bundertsstrasse 5
6300
Zug SWITZERLAND

hereinafter referred to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and application(s), including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, and any and all Letters Patent which may be granted thereon, including any and all renewals, reissues, reexaminations and extensions thereof.

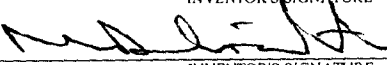
NOW, WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, ASSIGNOR hereby assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive right, title and interest in and to said invention and application(s), including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, and in and to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or to accrue with respect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said invention, SAID ASSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and application, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such Letters Patent when granted, including any and all renewals, reissues, reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal representatives, in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and enjoyed the same, if the assignment had not been made.

AND ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States and foreign countries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to execute any other papers that may be needed in connection with filing said applications and securing Letters Patents thereon.

AND ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on said application, and on any and all divisions and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith.

The undersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR

201 FULL NAME OF SOLE OR FIRST NAMED INVENTOR	INVENTOR'S SIGNATURE	DATE
Nigel D. ATHERTON		
202 FULL NAME OF SECOND JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Joseph W. TOTTEN		
203 FULL NAME OF THIRD JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Michael D. GAITONDE		5 November 2001
204 FULL NAME OF FOURTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
205 FULL NAME OF FIFTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
206 FULL NAME OF SIXTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
207 FULL NAME OF SEVENTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
208 FULL NAME OF EIGHTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
209 FULL NAME OF NINTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
210 FULL NAME OF TENTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE

ASSIGNMENT

ATTY. DOCKET NO.: PHARMA-131

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- ☒ for which U.S. Application Serial No. 09/891,206 for Letters Patent was filed in the U.S. Patent and Trademark Office on June 26, 2001
- ☐ for which an International Application was filed on _____ as _____, designating the United States.

AND WHEREAS

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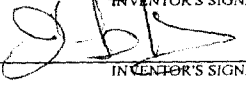
NOW, WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, ASSIGNOR hereby assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive right, title and interest in and to said invention and application(s), including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, and in and to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or to accrue with respect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said invention, SAID ASSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and application, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such Letters Patent when granted, including any and all renewals, reissues, reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal representatives, in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and enjoyed the same, if the assignment had not been made.

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IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR

201 FULL NAME OF SOLE OR FIRST NAMED INVENTOR	INVENTOR'S SIGNATURE	DATE
Nigel D. ATHERTON		14/06/01
202 FULL NAME OF SECOND JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Joseph W. TOTTEN		14/06/01
203 FULL NAME OF THIRD JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Michael D. GAITONDE		
204 FULL NAME OF FOURTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
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209 FULL NAME OF NINTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
210 FULL NAME OF TENTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE

RECORDED: 11/16/2001

PATENT
REEL: 012310 FRAME: 0345