



Current Agreements

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Fourth amendment to development and licensing agreement for oral parathyroid hormone

GSK

Unigene Laboratories

SmithKline Beecham

May 27 2004

Fourth amendment to development and licensing agreement for oral parathyroid hormone

Companies:	GSK Unigene Laboratories SmithKline Beecham
Announcement date:	May 27 2004 Development and licensing agreement for oral parathyroid hormone (terminated) First amendment to development and licensing agreement for oral parathyroid hormone Second amendment to development and licensing agreement for oral parathyroid hormone Third amendment to development and licensing agreement for oral parathyroid hormone Fifth amendment to development and licensing agreement for oral parathyroid hormone Sixth amendment to development and licensing agreement for oral parathyroid hormone Amended and restated development and licensing agreement for oral parathyroid hormone
Related contracts:	

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- [Financials](#)
- [Termsheet](#)
- [Press Release](#)
- [Filing Data](#)
- [Contract](#)

Details

Announcement date:	May 27 2004
Start date:	May 27 2004
Industry sectors:	Bigpharma Pharmaceutical
Therapy areas:	Metabolic Musculoskeletal » Osteoporosis
Technology types:	Biomaterials Drug delivery Peptides
Deal components:	Development Licensing
Stages of development:	Phase II
Geographic focus:	Worldwide

Financials

Termsheet

Not available.

Press Release

Not available.

Filing Data

Not available.

Contract

AMENDMENT NO. 4 TO

LICENSE AGREEMENT

DATED AS OF APRIL 13, 2002

BY AND BETWEEN

UNIGENE LABORATORIES, INC.

AND

SMITHKLINE BEECHAM CORPORATION

This Amendment No. 4 ("Amendment No. 4") dated as of May 27, 2004 ("Amendment Date"), to the License Agreement, entered into as of the 13th of April, 2002 and amended on January 14, 2003 and October 14, 2003 (referred to hereinafter as the "Agreement"), by and between Unigene Laboratories, Inc. ("Unigene"), a Delaware corporation, and SmithKline Beecham Corporation, a GlaxoSmithKline company ("GSK"), a Pennsylvania corporation.

WHEREAS, GSK and Unigene entered into the Agreement to provide for the license grant by Unigene to GSK of certain Licensed Technology (as defined in the Agreement) to discover, develop, make, have made, market, sell and import certain Licensed Products (as defined in the Agreement) throughout the world under the Unigene Patent Rights (as defined in the Agreement) and Unigene Know-How (as defined in the Agreement); and

WHEREAS, GSK and Unigene have also entered into a Phase I Clinical Manufacture and Supply Agreement dated November 20, 2002 (the "Phase I Agreement"); and

WHEREAS, pursuant to Section 11.10 of the Agreement, the Parties to the Agreement may, by written instruments specifically referring to and executed in the same manner as the Agreement, amend the Agreement; and

WHEREAS, the Parties hereto desire to amend the Agreement as provided herein, and any capitalized terms used herein shall have the meaning set forth in the Agreement;

NOW THEREFORE, for and in consideration of the premises and the mutual promises and benefits contained herein, GSK and Unigene hereby agree as follows:

1. Appendix B to the Agreement (the Work Plan) is hereby amended to add the activities regarding PTH*** set forth in Appendix A to this Amendment No. 4 at the FTE cost set forth in Appendix A to this Amendment No. 4.

2. Appendix C to the Agreement (Unigene Know-How and Technology Transfer) is hereby amended to add the technology and know-how regarding PTH*** set forth in Appendix B to this Amendment No. 4.

3. Section 4.5 of the Agreement shall be amended and restated in its entirety to read:

Unigene Data Transfer. Immediately after the Effective Date (or with respect to PTH *** Unigene Know-How, immediately after the Amendment Date of Amendment No. 4 to this Agreement, as applicable), Unigene shall use its reasonable best efforts to promptly transfer, or cause to be transferred to GSK, a copy of Unigene Know-How relating to PTH and the Licensed Product, including manufacture of API, to enable GSK to carry out its responsibilities under this Agreement. Such data shall include, at a minimum, the information set forth in Appendix C to this Agreement, attached hereto and incorporated herein.

4. Appendix A to Amendment No. 2 to the Agreement, dated October 14, 2003, is hereby amended to include:

Type

Designation (Designator)

*** Cell Bank

*** (Unigene)

*** Cell Bank

*** (Unigene)

*** (Unigene)

5. Except as specifically provided herein, all other terms and conditions of the Agreement shall remain in full force and effect, and this Amendment No. 4 to the Agreement shall not be construed to amend or waive any provisions of the Agreement except as specifically set forth above.

6. This Amendment No. 4 to the Agreement, and the rights and obligations of the Parties hereunder, shall be construed in accordance with, and governed by the laws of the Commonwealth of Pennsylvania (without regard to its conflict of laws principles).

7. This Amendment No. 4 may be executed in two (2) or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

8. This Amendment No. 4 shall inure to the benefit of and be binding upon the GSK and Unigene and their respective successors, heirs and assigns.

IN WITNESS WHEREOF, the Parties hereto have caused this Amendment No. 4 to be duly executed by their authorized representatives as of the Amendment Date.

UNIGENE LABORATORIES, INC. SMITHKLINE BEECHAM CORPORATION,

a GlaxoSmithKline Company

By: /s/ Ronald S. Levy

By: /s/ Donald F. Parman

Name: Ronald S. Levy Name: Donald F. Parman

Title: Executive Vice President Title: Vice President & Secretary

Appendix A

Summary of Unigene R&D FTE/Activities for PTH***

Activity Description

Estimated

Period Duration* Unigene

FTE

FERMENTATION and PURIFICATION:

Unigene to prepare Seed Bank of *** PTH*** and perform preliminary characterization tests to test for suitability of this cell bank. The following tests will be performed: Viable cell count, Kanamycin resistance, Verification of genotype, DNA sequencing of PTH insert. Vials of the Seed Bank will be transferred to GSK for preparation and characterization of Master and Working Cell Banks

* * * * *

FERMENTATION and PURIFICATION:

Unigene to optimize fermentation of *** at the 1 liter scale to develop consistent process and optimize productivity

* * * * *

FERMENTATION and PURIFICATION:

Unigene to optimize and scale up purification and amidation steps for PTH***

* * * * *

FERMENTATION and PURIFICATION:

Unigene to carry out 3 fermentations at the 30 liter scale for *** and purify and amidate material from these fermentations. Unigene will provide 20 grams of non-GMP PTH *** from these purifications

* * * * *

PTH *** IMMUNOASSAY DEVELOPMENT:

Optimize *** for the detection of PTH***. The *** will be the same *** antibody currently used for PTH***. The *** will be a *** that has already been prepared by Unigene that has a high titer binding for PTH***. If successful, an additional *** will be raised under contract at *** for an approximate cost of ***

* * * * *

PTH *** IMMUNOASSAY DEVELOPMENT:

Epitope mapping studies for *** PTH *** antibodies. Peptides for epitope mapping will be obtained by custom syntheses from external sources for an approximate cost of ***

* * * * *

FTE Cost ***

Total cost for Fermentation and Purification activities (including cost of 20g non-GMP material: ***

Total cost of Immunoassay Development activities (to include *** purchase of peptides for *** mapping and *** for cost of immunization at ***

Appendix B

Unigene Know-How and Technology Transfer with Respect to PTH***

1. All experimental details, data and documentation for pharmacology studies in any animal species with oral, subcutaneous, and IV ***PTH*** alone or compared to other peptide(s) performed by Unigene or third party laboratories.
2. Host cell, plasmids, documentation and experimental details for the preparation of ***PTH***, transformation and growth of cell strains expressing ***PTH***.
3. The current optimal cell strain for producing ***PTH*** and any other ***PTH*** strains deemed to be of interest to GSK.
4. The current optimal cell line for producing the amidating enzyme and any other cell lines expressing the amidating enzyme deemed to be of interest to GSK
5. All reagents, documentation and experimental details for expression, isolation and purification of ***PTH***.
6. All analytical experimental details, reagents, data and documentation for characterization of ***PTH***.
7. All reagents, documentation and experimental details for the preparation and purification of polyclonal antibodies against ***PTH***.
8. All analytical experimental details, data and documentation for characterization of the polyclonal ***PTH*** antibodies.
9. All experimental details, reagents, data and reports on ***PTH*** immunoassay development activity.
10. All reagents, documentation and experimental details for running the current immunoassay against ***PTH***.
11. All experimental details, data and documentation for pharmacokinetic studies in any animal species with oral, subcutaneous and IV ***PTH*** performed by Unigene or third party laboratories.