503612466 12/15/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3659097

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HIROSHI NAGASE	10/13/2015
HIDEAKI FUJII	10/07/2015
ERIKO NAKATA	10/08/2015
YOSHIKAZU WATANABE	10/13/2015
DAISUKE SAITO	10/05/2015
TOSHIHIRO TAKAHASHI	10/06/2015

RECEIVING PARTY DATA

Name:	THE KITASATO INSTITUTE
Street Address:	9-1, SHIROKANE 5-CHOME, MINATO-KU
City:	TOKYO
State/Country:	JAPAN
Postal Code:	108-8641
Name:	NIPPON CHEMIPHAR CO., LTD.
Name: Street Address:	NIPPON CHEMIPHAR CO., LTD. 2-3, IWAMOTO-CHO 2-CHOME, CHIYODA-KU
	·
Street Address:	2-3, IWAMOTO-CHO 2-CHOME, CHIYODA-KU

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14772188

CORRESPONDENCE DATA

Fax Number: (703)716-1180

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 703-716-1191

Email: gbpatent@gbpatent.com

Correspondent Name: GREENBLUM & BERNSTEIN, P.L.C.

Address Line 1: 1950 ROLAND CLARKE PLACE

Address Line 4: RESTON, VIRGINIA 20191

PATENT 503612466 REEL: 037295 FRAME: 0500

ATTORNEY DOCKET NUMBER:	P48447
NAME OF SUBMITTER:	SEAN MYERS-PAYNE
SIGNATURE:	/Sean Myers-Payne/
DATE SIGNED:	12/15/2015
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 16	
source=P48447_Assignment#page1.tif	
source=P48447_Assignment#page2.tif	
source=P48447_Assignment#page3.tif	
source=P48447_Assignment#page4.tif	
source=P48447_Assignment#page5.tif	
source=P48447_Assignment#page6.tif	
source=P48447_Assignment#page7.tif	
source=P48447_Assignment#page8.tif	
source=P48447_Assignment#page9.tif	
source=P48447_Assignment#page10.tif	
source=P48447_Assignment#page11.tif	
source=P48447_Assignment#page12.tif	
source=P48447_Assignment#page13.tif	
source=P48447_Assignment#page14.tif	
source=P48447_Assignment#page15.tif	

source=P48447_Assignment#page16.tif

PATENT REEL: 037295 FRAME: 0501

COMBINED INVENTOR'S DECLARATION AND ASSIGNMENT

DECLARATION

The herein-identified application was made or authorized to be made by me.

I believe I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Authorization to Permit Access to Application by Participating Office

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the herein-identified patent application is filed access to the herein-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the herein-identified patent application is filed to have access to the herein-identified patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the herein-identified patent application with respect to: 1) the herein-identified patent application application to which the herein-identified patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the herein-identified patent application; and 3) any U.S. application-as-filed from which benefit is sought in the herein-identified patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

The undersigned hereby authorizes the U.S. attorney or agent appointed herein to accept and follow instructions from either his foreign patent agent or corporate representative, if any, as to any action to be taken in the Patent and Trademark Office regarding this application without direct communication between the U.S. attorney or agent and the undersigned.

Direct Correspondence to: CUSTOMER NUMBER 07055

At: Greenblum & Bernstein, P.L.C. 1950 Roland Clarke Place Reston, VA 20191

Direct Telephone Calls to: Greenblum & Bernstein, P.L.C. (703) 716-1191

P48447 Page 2

ASSIGNMENT

WHEREAS, **Hiroshi NAGASE**, a resident of Ibaraki, Japan whose mailing address is c/o Life Science Center of Tsukuba Advanced Research Alliance, Tennoudai 1-1-1, Tsukuba, Ibaraki 305-8577 JAPAN, **Hideaki FUJII**, a resident of Kanagawa, Japan whose mailing address is c/o The KITASATO INSTITUTE, 9-1, Shirokane 5-chome, Minato-ku, Tokyo 108-8641 JAPAN, **Eriko NAKATA**, a resident of Saitama, Japan whose mailing address is c/o Nippon Chemiphar Co., Ltd. Discovery Reserach Laboratories, 1-22, Hikokawado, Misato-shi, Saitama 341-0005 JAPAN, **Yoshikazu WATANABE**, a resident of Tokyo, Japan whose mailing address is c/o Nippon Chemiphar Co., Ltd. Discovery Reserach Laboratories, 1-22, Hikokawado, Misato-shi, Saitama 341-0005 JAPAN, **Daisuke SAITO**, a resident of Tokyo, Japan whose mailing address is c/o Nippon Chemiphar Co., Ltd. Discovery Reserach Laboratories, 1-22, Hikokawado, Misato-shi, Saitama 341-0005 JAPAN, and **Toshihiro TAKAHASHI**, a resident of Saitama, Japan whose mailing address is c/o Nippon Chemiphar Co., Ltd. Discovery Reserach Laboratories, 1-22, Hikokawado, Misato-shi, Saitama 341-0005 JAPAN, hereinafter referred to as the ASSIGNORS, have invented a certain improvement relating to

MORPHINAN DERIVATIVE

for which an application for Letters Patent in the United States entered the National Stage in the United States Patent and Trademark Office on September 02, 2015 and was awarded Application No. **14/772,188**, and which Application is a National Stage of International Application No. PCT/JP2013/077886, filed October 15, 2013.

AND WHEREAS, **THE KITASATO INSTITUTE**, a corporation organized and existing under the laws of JAPAN, whose mailing address is 9-1, Shirokane 5-chome, Minato-ku, Tokyo 108-8641 JAPAN, and **NIPPON CHEMIPHAR CO.**, **LTD**, a corporation organized and existing under the laws of JAPAN, whose mailing address is 2-3, Iwamoto-cho 2-chome, Chiyoda-ku, Tokyo 101-0032 JAPAN, hereinafter known as the ASSIGNEES, are each desirous of acquiring an equal undivided interest in the entire right, title and interest for the United States in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted thereon, including any and all renewals, reissues, reexaminations, and prolongations thereof.

NOW, THIS WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, said ASSIGNORS hereby assign, sell and transfer to said ASSIGNEES, their assigns and legal representatives, the entire and exclusive right, title and interest in and to said invention and application, for the United States including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor and all rights to sue for past and future infringement thereunder, said ASSIGNEES and their assigns and legal representatives to have, hold, exercise and enjoy the said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted thereon, including any and all renewals, reissues, reexaminations, and prolongations thereof, with all the rights, powers, privileges, and advantages in any ways arising from or pertaining 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 prolongations thereof, for the use and benefit of said ASSIGNEES

P48447 Page 3

reissues, reexaminations, and prolongations thereof, for the use and benefit of said ASSIGNEES and their assigns and legal representatives in as ample and beneficial a manner to all intents and purposes as the said ASSIGNORS might or could have held and enjoyed the same, if this assignment had not been made.

AND said ASSIGNORS hereby agree to execute all papers necessary to file applications in the United States for said invention and to assign the same to said ASSIGNEES, or any assignee acquiring title to said invention, and to execute any other papers that may be needed in connection with filing said application and securing Letters Patent thereon.

AND said ASSIGNORS authorize and request the Commissioner of Patents to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said ASSIGNEES, their assigns and legal representatives, in accordance herewith.

IN TESTIMONY WHEREOF, this assignment is executed by said ASSIGNOR(S), on the respective date(s) indicated below.

First Witness (Optional):

Oct /3. 2015

Africadii Chagase Hiroshi NAGASE October 13, 2015

Second Witness (Optional):

Oct. 13. 20/5
(Date)

First Witness (Optional):

Timorupe Sto

(Name) Kennosuke ITO

9ot . /6 . 20/5 (Date)

Hideaki FUJII

Oct. 7, 2015

Date

Second Witness (Optional):

Fumika Konski (Name) Fumika KARAKI

Oct. 16, 2015
(Date)

IN TESTIMONY WHEREOF, this assignment is executed by said ASSIGNOR(S), on the

{P48447 02527561.DOC}

(Date)

Page 5

respective date(s) indicated below.	
First Witness (Optional):	
(Name)	
(Date)	
	Yoshikazu WATANABE
•	Date
Second Witness (Optional):	
(Name)	
(Date)	

IN TESTIMONY WHEREOF, this assignment is executed by said ASSIGNOR(S), on the

IN TESTIMONY WHEREOF, this assirespective date(s) indicated below.	ignment is executed by said ASSIGNOR(S), on the
First Witness (Optional):	
(Name)	
(Date)	
	Daisuke SAITO
	Date
Second Witness (Optional):	
(Name)	
(Date)	

IN TESTIMONY WHEREOF respective date(s) indicated below.	F, this assignment is executed by said ASSIGNOR(S), on the
First Witness (Optional):	
(Name)	
(Date)	
	Toshihiro TAKAHASHI
	Date
Second Witness (Optional):	
(Name)	
(Date)	

COMBINED INVENTOR'S DECLARATION AND ASSIGNMENT

DECLARATION

The herein-identified application was made or authorized to be made by me.

I believe I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Authorization to Permit Access to Application by Participating Office

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the herein-identified patent application is filed access to the herein-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the herein-identified patent application is filed to have access to the herein-identified patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the herein-identified patent application with respect to: 1) the herein-identified patent application-as-filed; 2) any foreign application to which the herein-identified patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the herein-identified patent application; and 3) any U.S. application-as-filed from which benefit is sought in the herein-identified patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

The undersigned hereby authorizes the U.S. attorney or agent appointed herein to accept and follow instructions from either his foreign patent agent or corporate representative, if any, as to any action to be taken in the Patent and Trademark Office regarding this application without direct communication between the U.S. attorney or agent and the undersigned.

Direct Correspondence to: CUSTOMER NUMBER 07055

At: Greenblum & Bernstein, P.L.C. 1950 Roland Clarke Place Reston, VA 20191

Direct Telephone Calls to: Greenblum & Bernstein, P.L.C. (703) 716-1191

ASSIGNMENT

WHEREAS, **Hiroshi NAGASE**, a resident of Ibaraki, Japan whose mailing address is c/o Life Science Center of Tsukuba Advanced Research Alliance, Tennoudai 1-1-1, Tsukuba, Ibaraki 305-8577 JAPAN, **Hideaki FUJII**, a resident of Kanagawa, Japan whose mailing address is c/o The KITASATO INSTITUTE, 9-1, Shirokane 5-chome, Minato-ku, Tokyo 108-8641 JAPAN, **Eriko NAKATA**, a resident of Saitama, Japan whose mailing address is c/o Nippon Chemiphar Co., Ltd. Discovery Reserach Laboratories, 1-22, Hikokawado, Misato-shi, Saitama 341-0005 JAPAN, **Yoshikazu WATANABE**, a resident of Tokyo, Japan whose mailing address is c/o Nippon Chemiphar Co., Ltd. Discovery Reserach Laboratories, 1-22, Hikokawado, Misato-shi, Saitama 341-0005 JAPAN, **Daisuke SAITO**, a resident of Tokyo, Japan whose mailing address is c/o Nippon Chemiphar Co., Ltd. Discovery Reserach Laboratories, 1-22, Hikokawado, Misato-shi, Saitama 341-0005 JAPAN, and **Toshihiro TAKAHASHI**, a resident of Saitama, Japan whose mailing address is c/o Nippon Chemiphar Co., Ltd. Discovery Reserach Laboratories, 1-22, Hikokawado, Misato-shi, Saitama 341-0005 JAPAN, hereinafter referred to as the ASSIGNORS, have invented a certain improvement relating to

MORPHINAN DERIVATIVE

for which an application for Letters Patent in the United States entered the National Stage in the United States Patent and Trademark Office on September 02, 2015 and was awarded Application No. **14/772,188**, and which Application is a National Stage of International Application No. PCT/JP2013/077886, filed October 15, 2013.

AND WHEREAS, **THE KITASATO INSTITUTE**, a corporation organized and existing under the laws of JAPAN, whose mailing address is 9-1, Shirokane 5-chome, Minato-ku, Tokyo 108-8641 JAPAN, and **NIPPON CHEMIPHAR CO.**, **LTD**, a corporation organized and existing under the laws of JAPAN, whose mailing address is 2-3, Iwamoto-cho 2-chome, Chiyoda-ku, Tokyo 101-0032 JAPAN, hereinafter known as the ASSIGNEES, are each desirous of acquiring an equal undivided interest in the entire right, title and interest for the United States in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted thereon, including any and all renewals, reissues, reexaminations, and prolongations thereof.

NOW, THIS WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, said ASSIGNORS hereby assign, sell and transfer to said ASSIGNEES, their assigns and legal representatives, the entire and exclusive right, title and interest in and to said invention and application, for the United States including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor and all rights to sue for past and future infringement thereunder, said ASSIGNEES and their assigns and legal representatives to have, hold, exercise and enjoy the said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted thereon, including any and all renewals, reissues, reexaminations, and prolongations thereof, with all the rights, powers, privileges, and advantages in any ways arising from or pertaining 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 prolongations thereof, for the use and benefit of said ASSIGNEES

reissues, reexaminations, and prolongations thereof, for the use and benefit of said ASSIGNEES and their assigns and legal representatives in as ample and beneficial a manner to all intents and purposes as the said ASSIGNORS might or could have held and enjoyed the same, if this assignment had not been made.

AND said ASSIGNORS hereby agree to execute all papers necessary to file applications in the United States for said invention and to assign the same to said ASSIGNEES, or any assignee acquiring title to said invention, and to execute any other papers that may be needed in connection with filing said application and securing Letters Patent thereon.

AND said ASSIGNORS authorize and request the Commissioner of Patents to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said ASSIGNEES, their assigns and legal representatives, in accordance herewith.

IN TESTIMONY WHEREOF, this assignment is executed by said ASSIGNOR(S), on the respective date(s) indicated below.

First Witness (Optional):	
(Name)	
(Date)	
(Date)	
	Hiroshi NAGASE
	Date
Second Witness (Optional):	
(Name)	
(Date)	
(Duto)	

IN TESTIMONY WHEREOF, this assignment is executed by said ASSIGNOR(S), on the respective date(s) indicated below.

First Witness (Optional):

(Name)

Hideaki FUJII

Date

Second Witness (Optional):

(Name)

First Witness (Optional):

Tsuyosh; Endo (Name) Tsuyoshi ENDO

October 9, 2015 (Date)

Eriko Nakata
Eriko NAKATA

October 8, 2015

Date

Second Witness (Optional):

Takaichi Hamano
(Name) Takaichi HAMANO

Dctober f, 20/5 (Date)

First Witness (Optional):

Saturhi Hashimbo (Name) Satoshi HASHIMOTO

October 13, 2015 (Date)

October , 13, 2015 Date

Second Witness (Optional):

Shi, michi Chigusa
(Name) Shinichi CHIGUSA

October 13, 20,5 (Date)

First Witness (Optional):

(Name) Satoshi HASHIMOTO

Jotosh Hashim &

October 5, 2015

(Date)

Daisuke Sajto

Daisuke SAITO

10 / 5 / 20 15 Date

Second Witness (Optional):

Shinichi Chiqua (Name) Shinichi CHIGUSA

October 5, 20,5
(Date)

First Witness (Optional):

Satoh Hashimate (Name) Satoshi HASHIMOTO

October 6, 2015 (Date)

Josh ho Jalenhar L' Toshihiro TAKAHASHI

October 6,2015
Date

Second Witness (Optional):

October 6, 2015
(Date)

{P48447 02527561.DOC}

RECORDED: 12/15/2015