PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT					
NATURE OF CONVEYANCE:	ASSIGNMENT					

CONVEYING PARTY DATA

Name	Execution Date
Zhi Lin	07/19/2010
Andrew R Hudson	07/19/2010
Cornelis A Van Oeveren	07/28/2010
Steven L Roach	07/19/2010
Jason C Pickens	07/19/2010
Yixing Shen	07/19/2010
Catalina Cuervo	08/19/2010
Lino J Valdez	07/19/2010
Jillian Basinger	07/19/2010
Virginia H Grant	07/19/2010

RECEIVING PARTY DATA

Name:	igand Pharmaceuticals, Inc.			
Street Address:	10275 Science Center Drive			
City:	San Diego			
State/Country:	CALIFORNIA			
Postal Code:	92121-1117			

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12775331

CORRESPONDENCE DATA

501293347

Fax Number: (949)760-9502

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 9497600404
Email: efiling@kmob.com

Correspondent Name: Knobbe Martens Olson & Bear LLP

Address Line 1: 2040 Main Street

PATENT

REEL: 025001 FRAME: 0528

OP \$40.00 12775331

Address Line 2: 14th Floor Address Line 4: Irvine, CALIFO	RNIA 92614
ATTORNEY DOCKET NUMBER:	LIGAND.156A
NAME OF SUBMITTER:	Christopher Sweeney
Total Attachments: 12 source=ExecutedAssignment#page1.tif source=ExecutedAssignment#page2.tif source=ExecutedAssignment#page3.tif source=ExecutedAssignment#page4.tif source=ExecutedAssignment#page5.tif source=ExecutedAssignment#page6.tif source=ExecutedAssignment#page7.tif source=ExecutedAssignment#page8.tif source=ExecutedAssignment#page9.tif source=ExecutedAssignment#page10.tif source=ExecutedAssignment#page11.tif source=ExecutedAssignment#page11.tif	

PATENT REEL: 025001 FRAME: 0529 Application No.: 12/775,331 Docket Number: LIGAND.156A Filing Date: May 6, 2010 Page 1 of 12

ASSIGNMENT

WHEREAS, Lin Zhi, a US citizen, residing at San Diego, CA, Andrew R. Hudson, a UK citizen, residing at San Diego, CA, Cornelis A. Van Oeveren, a spitizen, residing at San Diego, CA, Steve L. Roach, a US citizen, residing at San Diego, CA, Jason C. Pickens, a US citizen, residing at San Diego, CA, Yixing Shen, a CN citizen, residing at San Diego, CA, Caralina Cuervo, a US citizen, residing at San Diego, CA, Lino J. Valdez, a US citizen, residing at San Diego, CA, Jillian Basinger, a US citizen, residing at San Diego, CA, Virgina H. Grant, a US citizen, residing at San Diego, CA, (individual(s) hereinafter "ASSIGNOR") invented certain new and useful improvements, technology, inventions, developments, ideas or discoveries related to SMALL MOLECULE HEMATOPOIETIC GROWTH FACTOR MIMETIC COMPOUNDS THAT ACTIVATE HEMATOPOIETIC GROWTH FACTOR RECEPTORS (collectively hereinafter referred to as the "Work") for which an application for Letters Patent in the United States has been prepared for filing (identified above) with the United States Patent and Trademark Office (hereinafter the "Application");

AND WHEREAS, Ligand Pharmaceuticals, Inc., a California Corporation, with its principal place of business at 10275 Science Center Drive, San Diego, CA 92121-1117 (hereinafter the "ASSIGNEE"), desires to acquire the entire right, title, and interest in and to the Application and the Work:

NOW. THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR hereby acknowledges that ASSIGNOR has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title, and interest throughout the world in the Application and the Work, including all provisional applications relating thereto (including but not limited to U.S. Provisional Application No(s). 61/182060, filed May 28, 2009 (respectively if plural applications)), and all nonprovisional applications claiming priority thereto, including, all divisions, continuations, continuations-in-part, reissues, and reexaminations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions and any related Letters Patent which may hereafter be granted or filed in any country or countries foreign to the United States, all extensions, renewals and reissues thereof; and ASSIGNOR hereby authorizes and requests the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all related Letters Patent to the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND ASSIGNOR DOES HEREBY sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past infringements of said Letters Patent before or after issuance.

AND ASSIGNOR DOES HEREBY covenant and agree that ASSIGNOR will communicate to said ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR respecting the Work, and testify in any legal proceeding, assist in the preparation of any other provisional or non-provisional applications relating to the Application and the Work or any improvements made thereto, sign all lawful papers, execute and make all rightful oaths and/or declarations in connection with the Application and the Work including any improvements made thereto, any patent applications filed therefrom, and any continuing application filed from any of the aforementioned applications, and generally do everything possible to aid the ASSIGNEE, its

PATENT REEL: 025001 FRAME: 0530 Application No.: 12/775,331 Filing Date: May 6, 2010

Docket Number: LIGAND,156A

Page 2 of 12

successors, legal representatives and assigns, to obtain and enforce proper patent protection for the Work in all countries.

Zhi Lin

STATE OF CALIFORNIA

SS.

COUNTY OF San Diego

on 7/19/10, before me, Linda D. Sierra, notary public, personally appeared Zhi Lin who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is are subscribed to the within instrument, and acknowledged to me that he she/they executed the same in his her/their authorized capacity (iss), 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.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

[SEAL]

LINDA D. SIERRA
Commission # 1859206
Notary Public - California
San Diego County
My Comm. Expires Jul 26, 2013

Application No.: 12/775,331 Docket Number: LIGAND.156A Filing Date: May 6, 2010 Page 3 of 12 IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 19 day of ew R And Andrew R. Hudson STATE OF CALIFORNIA SS. COUNTY OF San Diego On 7 (9 10 before me, Linda D. Sierra, notary public, personally appeared Andrew R. Hudson who proved to me on the basis of satisfactory evidence to be the person(x) whose name(s)(is)see 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. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

[SEAL]

LINDA D. SIERRA
Commission # 1859206
Notary Public - California
San Diego County
My Comm. Expires Jul 26, 2013

Application	No.:	12	177	75,3	3′
Filing Date:	May	6,	20	10	

Docket Number: LIGAND.156A

Page 4 of 12

	TESTIMONY	į	hereunto	set	my	hand	and	seal	this	28	day	of
 												

Cornelis A. Van Oeveren

STATE OF CALIFORNIA

SS.

COUNTY OF San Diego

personally appeared Cornelis A. Van Oeveren who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is are subscribed to the within instrument, and acknowledged to me that he sherther executed the same in his her/their authorized capacity(tee), 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.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

[SEAL]

LINDA D. SIERRA
Commission # 1859206
Notary Public - California
San Diego County
My Comm. Expires Jul 26, 2013

Notary Signature

Filing Date: May 6, 2010 Page 5 of 12 IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 19 day of _Steve L. Roach Steven L. Roach STATE OF CALIFORNIA SS. **COUNTY OF** , before me, Linda personally appeared Steve J. Roach who proved to me on the basis of satisfactory evidence to be the person(x) whose name(x) is are subscribed to the within instrument, and acknowledged to me that he/spettrey 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.

[SEAL]

Application No.: 12/775,331

LiNDA D. SIERRA
Commission # 1859206
Notary Public - California
San Diego County
My Comm. Expires Jul 26, 2013

the foregoing paragraph is true and correct.

Notary Signature

I certify under PENALTY OF PERJURY under the laws of the State of California that

Docket Number: LIGAND.156A

Application No.: 12/775,331
Filling Date: May 6, 2010

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 19th day of July 2016

STATE OF CALIFORNIA

Ss.

COUNTY OF San Diego

On 11910 before me, Linda D. Sierra notary public, personally appeared Jason C. Pickens who proved to me on the basis of satisfactory evidence to be the person(x) whose name(x) (Says subscribed to the within instrument, and acknowledged to me that the signature(x) on the instrument the person(x), or the entity upon behalf of which the person(x) acted,

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

[SEAL]

executed the instrument.

LINDA D. SIERRA
Commission # 1859206
Notary Public - Celifornia
San Diego County
My Comm. Expires Jul 26, 2013

[SEAL]

LINDA D. SIERRA
Commission # 1859206
Notary Public - California
San Diego County
My Comm. Expires Jul 26, 2013

Notary Signature

le D. Sevira

Filing Date: May 6, 2010 Page 8 of 12 IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 19 day of AUGUST 20 10. Catalina Cuervo STATE OF CALIFORNIA SS. COUNTY OF on August 19,2010, before me, Catalina Chervo On <u>HUGUST 19,2010</u>, before me, <u>L'ATAIINA L'UETVO</u>, notary public, personally appeared Caralina Cuervo who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are 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. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Application No.: 12/775,331

Notary Signature

WITNESS my hand and official seal.

[SEAL]

CAROLYN MENGWASSER

NOTARY PUBLIC STATE OF TEXAS

Docket Number: LIGAND.156A

Docket Number: LIGAND.156A

Page 9 of 12

IN TESTIMONY WHEREOF, I	hereunto set my hand and seal this 19 day of
STATE OF CALIFORNIA COUNTY OF SAN Diego) } ss. }
person(x) whose name(x)(is)are subscrik he)she/they executed the same in (his)	perfore me, Linda D. Sierra, notary public, proved to me on the basis of satisfactory evidence to be the bed to the within instrument, and acknowledged to me that har/their authorized capacity(iss), and that by his/her/their on/s), or the entity upon behalf of which the person(s) acted,
I certify under PENALTY of the foregoing paragraph is true and correct	OF PERJURY under the laws of the State of California that ect.

WITNESS my hand and official seal.

LINDA D. SIERRA
Commission # 1859206
Notary Public - California
San Diego County
My Comm. Expires Jul 26, 2013

Notary Signature

PATENT

Application No.: 12/775,331 Docket Number: LIGAND.156A Filing Date: May 6, 2010 Page 10 of 12 IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 19 day of Jillian Basinger STATE OF CALIFORNIA COUNTY OF San Diego ___, before me, <u>Linda D. Sierra</u> personally appeared Jillian Basinger who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) (is) are subscribed to the within instrument, and acknowledged to me that se she itsey executed the same in his her/their authorized capacity(ise), 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. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

[SEAL]

LINDA D. SIERRA

Commission # 1859206

Notary Public - California
San Diego County

My Comm. Expires Jul 26, 2013

Notary Signature

Application No.: 12/775,331 Docket Number: LIGAND.156A Page 11 of 12 Filing Date: May 6, 2010 IN TESTIMONY WHEREOF, I hereunto set my hand and seal this \mathcal{T}^{+} Virginia H. Grant STATE OF CALIFORNIA SS. COUNTY OF SAN Dieg 3 On 7/19/10 , before me, Linda D. Sierra personally appeared Virginia H. Grant who proved to me on the basis of satisfactory evidence to be the person(x) whose name(s)(is/are-subscribed to the within instrument, and acknowledged to me that the she have 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. I certify under PENALTY OF PERJURY under the laws of the State of California that

WITNESS my hand and official seal.

[SEAL]

LINDA D. SIERRA
Commission # 1859206
Notary Public - California
San Diego County
My Comm. Expires Jul 26, 2013

the foregoing paragraph is true and correct.

Application No.: 12/775,331 Filing Date: May 6, 2010

Docket Number: LIGAND.156A Page 12 of 12

PAT-ASSIGNMENT

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PATENT REEL: 025001 FRAME: 0541

RECORDED: 09/16/2010