PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3297182

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PETER D. KWONG	12/10/2014
BARNEY S. GRAHAM	12/10/2014
JASON S. MCLELLAN	11/25/2014
JEFFREY BOYINGTON	12/04/2014
LEI CHEN	12/08/2014
MAN CHEN	12/01/2014
GWO-YU CHUANG	12/04/2014
IVELIN STEFANOV GEORGIEV	12/18/2014
JASON GORMAN	12/01/2014
MICHAEL GORDON JOYCE	12/04/2014
MASARU KANEKIYO	01/22/2015
GILAD OFEK	03/20/2015
MARIE PANCERA	12/16/2014
MALLIKA SASTRY	12/16/2014
CINQUE SOTO	12/01/2014
SANJAY SRIVATSAN	12/05/2014
GUILLAUME STEWART-JONES	02/04/2015
YONGPING YANG	12/16/2014
BAOSHAN ZHANG	12/08/2014
TONGQING ZHOU	12/09/2014

RECEIVING PARTY DATA

Name:	THE UNITED STATES OF AMERICA, AS REPRESENTED BY THE SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES
Street Address:	6011 EXECUTIVE BOULEVARD
Internal Address:	SUITE 325, MSC 7660
City:	BETHESDA
State/Country:	MARYLAND
Postal Code:	20892-7660

PROPERTY NUMBERS Total: 6

PATENT REEL: 035333 FRAME: 0099

503250563

Property Type	Number
Application Number:	14207372
PCT Number:	US2014026714
Application Number:	61780910
Application Number:	61798389
Application Number:	61857613
Application Number:	61863909

CORRESPONDENCE DATA

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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.

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Email: sarah.flugum@klarquist.com

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NAME OF SUBMITTER:	GREGORY K. SCOTT
SIGNATURE:	/Gregory K. Scott/
DATE SIGNED:	04/03/2015

Total Attachments: 28

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PATENT REEL: 035333 FRAME: 0100

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PATENT REEL: 035333 FRAME: 0101

ASSIGNMENT FOR NIH/FDA/CDC INVENTIONS AIA (NIH OR FDA OR CDC CO-INVENTORS ONLY)

WHEREAS, I/we, Peter D. Kwong, Barney S. Graham, Jason S. McLellan, Jeffrey Boyington, Lei Chen, Man Chen, Gwo-Yu Chuang, Ivelin Stefanov Georgiev, Jason Gorman, Michael Gordon Joyce, Masaru Kanekiyo, Gilad Ofek, Marie Pancera, Mallika Sastry, Cinque Soto, Sanjay Srivatsan, Guillaume Stewart-Jones, Yongping Yang, Baoshan Zhang, and Tongqing Zhou, an employee/employees and/or a contractor/contractors of the National Institutes of Health,

is/are each employed and/or contracted by a component of the United States Department of Health and Human Services having an address at the Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, MSC 7660, Bethesda, MD 20892-7660, and have made certain inventions as described and claimed in:

- U.S. Provisional Patent Application No. 61/780,910, filed on March 13, 2013, entitled "PREFUSION RSV F PROTEINS AND THEIR USE."
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- U.S. Patent Application No. 14/207,372, filed on March 12, 2014, entitled "PREFUSION RSV F PROTEINS AND THEIR USE,"

all of which applications are collectively referred to herein as "The Patent Applications"; and

WHEREAS, I am/we are the inventor(s) named in The Patent Applications; and

WHEREAS, the inventions described and claimed in The Patent Applications were made under conditions such as to entitle THE UNITED STATES OF AMERICA, as represented by the Secretary, Department of Health and Human Services [hereinafter THE GOVERNMENT] under Executive Order 10096 and its amendments, 35 U.S.C. §§200-201, §§206-207, and §210 and 37 C.F.R. Part 501 to the right, title, and interest in such inventions; and

WHEREAS, THE GOVERNMENT is desirous of acquiring all domestic and foreign right, title, and interest in the inventions described and claimed in The Patent Applications;

ASSIGNMENT - Page 1 of 12

NOW, THEREFORE, having the legal obligation to assign my/our right, title and interest in the inventions described and claimed in **The Patent Applications** to **THE GOVERNMENT**, having a place of business at the Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, MSC 7660, Bethesda, MD 20892-7660 and for consideration, the receipt and sufficiency of which are hereby acknowledged, I/we hereby assign and transfer to **THE GOVERNMENT**:

the entire right, title, and interest in and to any and all inventions described and claimed in **The Patent Applications** and any and all Letters Patent which may be granted thereon, and any and all continuations, divisions, reissues or extensions thereof; and

all rights to claim priority on the basis of **The Patent Applications** including but not limited to applications filed through the provisions of the Patent Cooperation Treaty ("PCT Applications"); and

all applications for Letters Patent that may be filed for any and all inventions described and claimed in **The Patent Applications** that may be filed in any foreign country and all Letters Patent that may be granted thereon in any foreign country and all extensions, renewals, and reissues thereof; and

any and all such Letters Patent as may be granted in the United States or any foreign country to be held by THE GOVERNMENT to the end of the term for which the same would have been held by the inventor(s) had this assignment not been made.

I/we further agree to make, execute, and deliver to THE GOVERNMENT, upon request, any and all papers, documents, affidavits, or other instruments that may be necessary in the prosecution of any application or applications for improvements or reissues of Letters Patent, and to assist THE GOVERNMENT in every way as may be requested in protecting said invention.

IN WITNESS WHEREOF we subscribe our hands and seals on the dates shown below:

ASSIGNMENT - Page 2 of 12

Inventor: Peter D. Kwong	2	
Date 10 Dear 2014	Inventor Signature	***************************************
County of Williams		
State ofSubscribed and sworn to before me this _		r.
MONIQUE C. YOUNG Notary Public Prince George's County Maryland My Commission Expires Oct. 7, 2016	Notary Signature: Notary Public for the State of: My Commission Expires:	
Inventor: Barney S. Graham		
Date 10 Dec 2014	Inventor Signature	
County of	<u></u>	
State ofSubscribed and sworn to before me this	day of <u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>	
Seal MONIQUE C. YOUNG	, , , , , , , , , , , , , , , , , , , ,	

ASSIGNMENT - Page 3 of 12

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Inventor: Jason S. McLellan	
Date	
	Inventor Signature
County of	
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Subscribed and sworn to before me this	day of
Seal	
	Notary Signature:
	Notary Public for the State of:
	My Commission Expires:
Inventor: Jeffrey Boyington	
Date	Jeffy C Boylog for Inventor Signature
County of Montgomery	
State of Maryland	
Subscribed and sworn to before me this	day of WWW JW.
MONIQUE C. YOUNG Notary Public Prince George's County Maryland My Commission Expires Oct. 7, 2016	Notary Signature: Notary Public for the State of: My Commission Expires:

County of Montgomers

Subscribed and sworn to before me this

MONIQUE C. YOUNG Notary Public

Prince George's County Maryland

My Commission Expires Oct. 7, 2016

State of Man

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Inventor: Lei Chen	
Date	Inventor Signature
County of Montgomery State of Mary Land	••••
Subscribed and sworn to before me this	Ath day of December 2014
MONIQUE C. YOUNG Notary Public Prince George's County Maryland My Commission Expires Oct. 7, 2016	Notary Signature: Notary Public for the State of: My Commission Expires:
la contra Mario Ob	
Inventor: Man Chen	
Date	Inventor Signature
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Notary Public for the State of:

My Commission Expires:

ASSIGNMENT - Page 5 of 12

Inventor: Gwo-Yu Chuang
Date 12/4/2014
Inventor Signature
County of Montgomey/
State of Mandand
Subscribed and sworn to before me this 4/4 day of 100 minutes 100
MONIQUE C. YOUNG Notary Public Prince George's County Maryland My Commission Expires Oct. 7, 2016 My Commission Expires: My Commission Expires:
Inventor: Ivelin Stefanov Georgiev
Date 12/18/2014
Inventor Signature
County of MONTE-OMERS
State of MARSLAND
Subscribed and sworn to before me this day of
Sear MONIQUE C. YOUNG Notary Public Prince George's County Notary Signature:
Maryland My Commission Expires Oct. 7, 2016 Notary Public for the State of:

My Commission Expires:

Inventor: Jason Gorman	
Date <u> ไป/ ไ / ไ ฮ ฯ</u>	Inventor Signature
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Seal MONIQUE C. YOUNG Notary Public Prince George's County Maryland My Commission Expires Oct. 7; 2016	Notary Signature: Notary Public for the State of: My Commission Expires:
Inventor: Michael Gordon Joyce	
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Inventor: Gilad Ofek	
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Inventor: Marie Pancera
Date 12/16/14
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Se MONIQUE C. YOUNG Notary Public Prince George's County Maryland My Commission Expires Oct. 7, 2016 My Commission Expires Commission Expires: My Commission Expires:
Inventor: Mallika Sastry
Date 12/16/14 Matthe South
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State of MARYLAND
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Seal MONIQUE C. YOUNG Notary Public Prince George's County Maryland My Commission Expires Oct. 7, 2016 Notary Public for the State of:

ASSIGNMENT - Page 9 of 12

My Commission Expires:

Inventor: Cinque Soto		
Date 12/1/2014	Inventor/Signature	
County of Montgomery	 -	
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Inventor: Sanjay Srivatsan	· · · · · · · · · · · · · · · · · · ·	
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Inventor: Baoshan Zhang	4	
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Inventor: Tongqing Zhou		
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Inventor: Tongqing Zhou		
Date 12/09/2014	Inventor Signature	<u>></u>
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Sea MONIQUE C. YOUNG Notary Public Prince George's County Maryland My Commission Expires Oct. 7, 2016	Notary Signature: Notary Public for the State of: My Commission Expires:	

ASSIGNMENT - Page 12 of 12

Inventor: Guillaume Stewart-Jones	
Date	Inventor Signature
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MONIQUE C. YOUNG Notary Public Prince George's County Maryland My Commission Expires Oct. 7, 2016	Notary Signature: Notary Public for the State of: My Commission Expires:
Inventor: Yongping Yang	
Date	Inventor Signature
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Subscribed and sworn to before me this	day of <u>///////////////////////////////////</u>
Seal MONIQUE C. YOUNG Notary Public Prince George's County Maryland My Commission Expires Oct. 7, 2016	Notary Signature: Notary Public for the State of My Commission Expires:

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ASSIGNMENT - Page 2 of 12

Inventor: Peter D. Kwong	
Date	Inventor Signature
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Subscribed and sworn to before me this	day of
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	Notary Signature:
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	My Commission Expires:
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Inventor: Jason S. McLellan	,
Date 11/25/14	
	Inventor Signature
County of <u>Grafton</u>	
State of Now Hampshine	
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	My Commission Expires: <u>Tanuary 37, 20/5</u>
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Inventor: Jeffrey Boyington	
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ASSIGNMENT - Page 4 of 12

Inventor: Lei Chen	
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	Notary Signature:
	Notary Public for the State of:
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Inventor: Man Chen	
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Inventor: Gwo-Yu Chuang	
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Inventor: Ivelin Stefanov Georgiev	
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Inventor: Jason Gorman	
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Inventor: Michael Gordon, Joyco	
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Inventor: Masaru Kanekiyo	
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Inventor: Gilad Ofek	
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Inventor: Marie Pancera	
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Inventor: Mallika Sastry	
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Inventor: Cinque Soto	
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	Notary Public for the State of:
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Inventor: Sanjay Srivatean	
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Inventor: Guillaume Stewart-Jones	
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Inventor: Yongping Yang	
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Inventor: Baoshan Zhang	
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Inventor: Tongging Zhou	
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WHEREAS, THE GOVERNMENT is desirous of acquiring all domestic and foreign right, title, and interest in the inventions described and claimed in The Patent Applications;

ASSIGNMENT - Page 1 of 12

PATENT REEL: 035333 FRAME: 0126 NOW, THEREFORE, having the legal obligation to assign my/our right, title and interest in the inventions described and claimed in **The Patent Applications** to **THE GOVERNMENT**, having a place of business at the Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, MSC 7660, Bethesda, MD 20892-7660 and for consideration, the receipt and sufficiency of which are hereby acknowledged, I/we hereby assign and transfer to **THE GOVERNMENT**:

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IN WITNESS WHEREOF we subscribe our hands and seals on the dates shown below:

ASSIGNMENT - Page 2 of 12

Inventor: Masaru Kanekiyo	
Date	
	Inventor Signature
County of	
State of	
Subscribed and sworn to before me this _	day of
Seal	
	Notary Signature:
	Notary Public for the State of:
	My Commission Expires:
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Inventor: Gilad Ofek	
Date 3/20/2015	_Q
	Inventor Signature
County of MONTGONEXY	~
State of MAXYLAND	
Subscribed and swom to before me this 2	oth day of Marly , 2015.
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	Notary Signature: Ita Flour
	Notary Public for the State of: Mary Land
	My Commission Expires: 02/26/2018
	*

Inventor: Cinque Soto	
Date	Inventor Signature
County of	•
State of	
Subscribed and sworn to before me this	day of
Seal	
	Notary Signature:
	Notary Public for the State of:
	My Commission Expires:
Inventor: Sanjay Srivatsan Date	Inventor Signature
County of	//
State of	
Subscribed and sworn to before me this	day of
Seal	
	Notary Signature:
	Notary Public for the State of:
	My Commission Expires:

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