

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5165283

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
PETER KWONG	04/19/2017
BARNEY GRAHAM	04/18/2017
JOHN MASCOLA	04/10/2017
LI OU	04/11/2017
ALIAKSANDR DRUZ	04/12/2017
MAN CHEN	04/11/2017
WING-PUI KONG	04/24/2017
MICHAEL GORDON JOYCE	04/25/2017
YAROSLAV TSYBOVSKY	04/20/2017
MARIE PANCERA	04/13/2017
MALLIKA SASTRY	04/11/2017
CINQUE SOTO	04/20/2017
GUILLAUME STEWART-JONES	04/10/2017
YONGPING YANG	04/11/2017
BAOSHAN ZHANG	04/14/2017
IVELIN STEFANOV GEORGIEV	04/14/2017
EMILY RUNDLET	06/26/2017
PAUL THOMAS	07/05/2017
JOSEPH VAN GALEN	06/30/2017
ULRICH BAXA	07/05/2017
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, Suite 325, MSC 7660
Internal Address:	Office of Technology Transfer, National Institutes of Health,
City:	Bethesda
State/Country:	MARYLAND
Postal Code:	20892-7660
PROPERTY NUMBERS Total: 1	

Property Type	Number
Application Number:	16089993

CORRESPONDENCE DATA

Fax Number: (503)595-5301
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: 503-595-5300
Email: deborah.martin@klarquist.com
Correspondent Name: GREGORY K. SCOTT, PH.D., KLARQUIST SPARKMAN LLP
Address Line 1: 121 SW SALMON STREET
Address Line 2: ONE WORLD TRADE CENTER, SUITE 1600
Address Line 4: PORTLAND, OREGON 97204-2988

ATTORNEY DOCKET NUMBER:	4239-96275-08
NAME OF SUBMITTER:	GREGORY K. SCOTT, PH.D.
SIGNATURE:	/Gregory K. Scott/
DATE SIGNED:	09/28/2018

Total Attachments: 41
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**ASSIGNMENT FOR NIH/FDA/CDC INVENTIONS AIA
(NIH OR FDA OR CDC CO-INVENTORS ONLY)**

WHEREAS, we, Peter Kwong, Barney Graham, John Mascola, Li Ou, Aliaksandr Druz, Man Chen, Wing-Pui Kong, Ivelin Stefanov Georgiev, Emily Rundlet, Michael Gordon Joyce, Yaroslav Tsybovsky, Paul Thomas, Marie Pancera, Mallika Sastry, Cinque Soto, Joseph Van Galen, Guillaume Stewart-Jones, Yongping Yang, Baoshan Zhang, and Ulrich Baxa, employees and/or contactors of the National Institutes of Health, 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. 62/314,946, filed on March 29, 2016, entitled "RSV F IMMUNOGENS AND THEIR USE," and

PCT Patent Application No. PCT/US2017/024714, filed on March 29, 2017, entitled "RSV F IMMUNOGENS AND THEIR USE,"

both applications are collectively referred to herein as "**The Patent Application(s)**"; and

WHEREAS, we are the inventors named in **The Patent Application(s)**; and

WHEREAS, the inventions described and claimed in **The Patent Application(s)** 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 entire 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 Application(s)**;

NOW, THEREFORE, having the legal obligation to assign our right, title and interest in the inventions described and claimed in **The Patent Application(s)** 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, 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 Application(s)** and any and all Letters Patent which may be granted thereon, and any and all continuations, divisions, reissues or extensions thereof; and


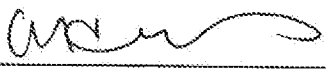
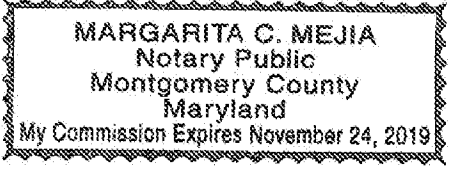
all rights to claim priority on the basis of **The Patent Application(s)** including but not limited to applications filed through the provisions of the Patent Cooperation Treaty ("PCT Applications"); and

all applications for Letters Patent that may be filed for any and all inventions described and claimed in **The Patent Application(s)** 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.

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:

Inventor: Peter Kwong	
Date <u>11 Apr 2019</u>	 Inventor Signature
County of <u>Montgomery</u>	
State of <u>Maryland</u>	
Subscribed and sworn to before me this <u>19</u> day of <u>April</u> , <u>2019</u> .	
Seal	Notary Signature: 
	Notary Public for the State of: <u>Maryland</u>
	My Commission Expires: <u>NOV-24, 2019</u>

Inventor: Barney Graham

Date 4/18/17 [Signature]
Inventor Signature

County of Montgomery

State of Maryland

Subscribed and sworn to before me this 18 day of April, 2017.

Seal

MARGARITA C. MEJIA
Notary Public
Montgomery County
Maryland
My Commission Expires November 24, 2019

Notary Signature: [Signature]

Notary Public for the State of: Maryland

My Commission Expires: Nov. 24, 2019

Inventor: John Mascola

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: Barney Graham

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: John Mascola

Date 10 April 2017

Inventor Signature [Signature]

County of Montgomery

State of Maryland

Subscribed and sworn to before me this 10 day of April, 2017.

Seal


MARGARITA C. MEJIA
Notary Public
Montgomery County
Maryland
My Commission Expires November 24, 2019

Notary Signature [Signature]

Notary Public for the State of: Maryland

My Commission Expires: NOV. 24 2019

Inventor: Li Ou ✓	
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: Aliaksandr Druz	
Date <u>04/12/2017</u>	Inventor Signature <u></u>
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: Li Ou

Date 04-11-2017 [Signature]
 Inventor Signature

County of Montgomery
 State of Maryland

Subscribed and sworn to before me this 11 day of April, 2017.

Seal

MARGARITA C. MEJIA
 Notary Public
 Montgomery County
 Maryland
 My Commission Expires November 24, 2019

Notary Signature: [Signature]
 Notary Public for the State of: Maryland
 My Commission Expires: Nov. 24, 2019

Inventor: Aliaksandr Druz

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: Man Chen

Date 4/11/2017

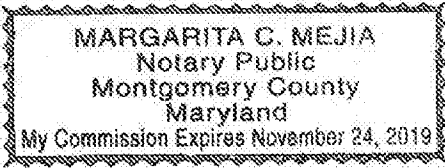
[Signature]
Inventor Signature

County of Montgomery

State of Maryland

Subscribed and sworn to before me this 11 day of April, 2017.

Seal



Notary Signature: [Signature]

Notary Public for the State of: Maryland

My Commission Expires: Nov. 24, 2019

Inventor: Wing-Pui Kong

Date 4-24-2017

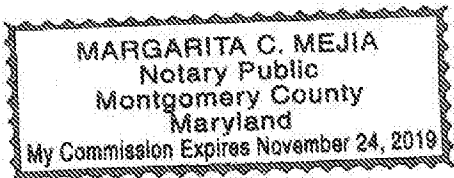
[Signature]
Inventor Signature

County of Montgomery

State of Maryland

Subscribed and sworn to before me this 24 day of April, 2017.

Seal



Notary Signature: [Signature]

Notary Public for the State of: Maryland

My Commission Expires: Nov. 24, 2019

Inventor: Ivelin Stefanov Georgiev

Date _____

County of _____

State of _____

Subscribed and sworn to before me this _____ day of _____, _____.

Seal

Inventor Signature _____

Notary Signature: _____

Notary Public for the State of: _____

My Commission Expires: _____

Inventor: Emily Rundlet

Date _____

County of _____

State of _____

Subscribed and sworn to before me this _____ day of _____, _____.

Seal

Inventor Signature _____

Notary Signature: _____

Notary Public for the State of: _____

My Commission Expires: _____

Inventor: Michael Gordon Joyce

Date 4-25-17 Michael Gordon Joyce
Inventor Signature

County of Montgomery
State of Maryland

Subscribed and sworn to before me this 25 day of April, 2017.

Seal

MARGARITA C. MEJIA
Notary Public
Montgomery County
Maryland
My Commission Expires November 24, 2019

Notary Signature: [Signature]
Notary Public for the State of: Maryland
My Commission Expires: 11/24/19

Inventor: Yaroslav Tsybovsky

Date 04/20/2017 [Signature]
Inventor Signature

County of Frederick
State of Maryland

Subscribed and sworn to before me this 20th day of April, 2017.

Seal

BALTIMORE COUNTY, MD
FEBRUARY 01, 2002
PUBLIC
NOTARY
LEONIA N. HEMKA
COMM. EXPIRES

Notary Signature: [Signature]
Notary Public for the State of: Maryland
My Commission Expires: 02/01/2020

Inventor: Paul Thomas

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: Marie Pancera ✓

Date 4/13/2017

M Pancera
Inventor Signature

County of KING

State of WASHINGTON

Subscribed and sworn to before me this 13th day of APRIL, 2017.

Seal

Notary Signature: Emily R. High

Notary Public for the State of: WASHINGTON

My Commission Expires: 10/11/2020



Inventor: Mallika Sastry ✓

Date 04/11/17 Mallika Sastry
 Inventor Signature

County of MONTGOMERY

State of MARYLAND

Subscribed and sworn to before me this 11 day of April, 2017.

Seal

MARGARITA C. MEJIA
 Notary Public
 Montgomery County
 Maryland
 My Commission Expires November 24, 2018

Notary Signature: [Signature]
 Notary Public for the State of: Maryland
 My Commission Expires: Nov. 24, 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: Mallika Sastry	
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: Cinque Soto ✓	
Date <u>04/20/2017</u>	<u>Cinque Soto</u> 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: Joseph Van Galen

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: Guillaume Stewart-Jones

Date 04/10/2017

GS-Jones
Inventor Signature

County of United States of America

State of Maryland

Subscribed and sworn to before me this 10 day of April, 2017.

Seal

MARGARITA C. MEJIA
Notary Public
Montgomery County
Maryland
My Commission Expires November 24, 2019

Notary Signature: [Signature]

Notary Public for the State of: Maryland

My Commission Expires: Nov. 24, 2019

Inventor: Yongping Yang

Date 04-11-2017 Inventor Signature *Y P Yang*

County of Montgomery

State of MD

Subscribed and sworn to before me this 11 day of April, 2017.

Seal

MARGARITA C. MEJIA
Notary Public
Montgomery County
Maryland
My Commission Expires November 24, 2019

Notary Signature: *Margarita C. Mejia*

Notary Public for the State of: Maryland

My Commission Expires: Nov. 24, 2019

Inventor: Baoshan Zhang

Date 4/14/2017 Inventor Signature *Baoshan Zhang*

County of Montgomery

State of Maryland

Subscribed and sworn to before me this 14 day of April, 2017.

Seal

MARGARITA C. MEJIA
Notary Public
Montgomery County
Maryland
My Commission Expires November 24, 2019

Notary Signature: *Margarita C. Mejia*

Notary Public for the State of: Maryland

My Commission Expires: Nov. 24, 2019

Inventor: Ulrich Baxa	
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: _____

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

WHEREAS, we, Peter Kwong, Barney Graham, John Mascola, Li Ou, Aliaksandr Druz, Man Chen, Wing-Pui Kong, Ivelin Stefanov Georgiev, Emily Rundlet, Michael Gordon Joyce, Yaroslav Tsybovsky, Paul Thomas, Marie Pancera, Mallika Sastry, Cinque Soto, Joseph Van Galen, Guillaume Stewart-Jones, Yongping Yang, Baoshan Zhang, and Ulrich Baxa, employees and/or contactors of the National Institutes of Health, 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. 62/314,946, filed on March 29, 2016, entitled "RSV F IMMUNOGENS AND THEIR USE," and

PCT Patent Application No. PCT/US2017/024714, filed on March 29, 2017, entitled "RSV F IMMUNOGENS AND THEIR USE,"

both applications are collectively referred to herein as "**The Patent Application(s)**"; and

WHEREAS, we are the inventors named in **The Patent Application(s)**; and

WHEREAS, the inventions described and claimed in **The Patent Application(s)** 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 entire 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 Application(s)**;

NOW, THEREFORE, having the legal obligation to assign our right, title and interest in the inventions described and claimed in **The Patent Application(s)** 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, 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 Application(s)** 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 Application(s)** 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 Application(s)** 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.

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:

Inventor: Peter Kwong	
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: Barney Graham

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: John Mascola

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: Li Ou

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: Aliaksandr Druz

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: Man Chen

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: Wing-Pui Kong

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: Ivelin Stefanov Georgiev

Date 04/14/2017

Ivelin Georgiev
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: Emily Rundlet

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: Michael Gordon Joyce

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: Yaroslav Tsybovsky

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: Paul Thomas

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: Marie Pancera

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: Mallika Sastry

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: 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: Joseph Van Galen

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: Guillaume Stewart-Jones

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: Yongping Yang

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: Baoshan Zhang

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: Ulrich Baxa

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: _____

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

WHEREAS, we, Peter Kwong, Barney Graham, John Mascola, Li Ou, Aliaksandr Druz, Man Chen, Wing-Pui Kong, Ivelin Stefanov Georgiev, Emily Rundlet, Michael Gordon Joyce, Yaroslav Tsybovsky, Paul Thomas, Marie Pancera, Mallika Sastry, Cinque Soto, Joseph Van Galen, Guillaume Stewart-Jones, Yongping Yang, Baoshan Zhang, and Ulrich Baxa, employees and/or contactors of the National Institutes of Health, 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:

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WHEREAS, the inventions described and claimed in **The Patent Application(s)** 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 entire 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 Application(s)**;

NOW, THEREFORE, having the legal obligation to assign our right, title and interest in the inventions described and claimed in **The Patent Application(s)** 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, 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 Application(s)** 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 Application(s)** 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 Application(s)** 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.

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:

Inventor: Peter Kwong	
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: Barney Graham

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: John Mascola

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: Li Ou	
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: Aliaksandr Druz	
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: Man Chen	
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: Wing-Pui Kong	
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: Ivelin Stefanov Georgiev

Date _____

Inventor Signature

County of _____

State of _____

Subscribed and sworn to before me this _____ day of _____, _____.

Seal

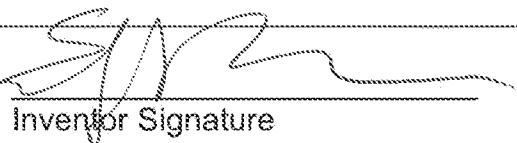
Notary Signature: _____

Notary Public for the State of: _____

My Commission Expires: _____

Inventor: Emily Rundlet

Date 6-26-2017



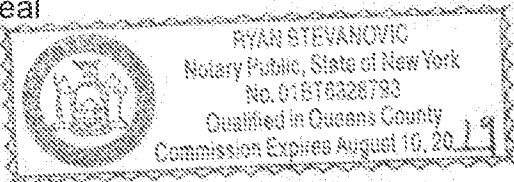
Inventor Signature

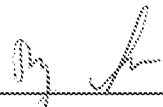
County of Queens

State of New York

Subscribed and sworn to before me this 26 day of June, 2017.

Seal



Notary Signature:  _____

Notary Public for the State of: New York

My Commission Expires: 8-10-19

Inventor: Michael Gordon Joyce	
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: Yaroslav Tsybovsky	
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: Paul Thomas

Date 2017 July 05

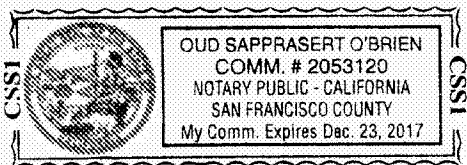
[Signature]
Inventor Signature

County of SAN FRANCISCO

State of CALIFORNIA

Subscribed and sworn to before me this 5th day of JULY, 2017.

Seal



Notary Signature: Oud Sapprasert O'Brien

Notary Public for the State of: CALIFORNIA

My Commission Expires: 12/23/2017

Inventor: Marie Pancera

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: Mallika Sastry	
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: 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: Joseph Van Galen

Date 6/30/2017 *[Signature]*
 Inventor Signature

County of Montgomery
 State of Pennsylvania

Subscribed and sworn to before me this 30 day of June, 2017.

Seal

COMMONWEALTH OF PENNSYLVANIA
 NOTARIAL SEAL
 ASHLEY KEARNEY
 Notary Public
 LANSDALE BORO, MONTGOMERY COUNTY
 My Commission Expires Jun 26, 2019

Notary Signature: *[Signature]*
 Notary Public for the State of: Pennsylvania
 My Commission Expires: June 25, 2019

Inventor: Guillaume Stewart-Jones

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: Yongping Yang	
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: Baoshan Zhang	
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: Ulrich Baxa	
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: _____

**ASSIGNMENT FOR NIH/FDA/CDC INVENTIONS AIA
(NIH OR FDA OR CDC AND LEIDOS BIOMEDICAL CO-INVENTORS ONLY)**

WHEREAS, I, Ulrich Baxa, an employee of Leidos Biomedical Research, Inc., a subsidiary of Leidos, Inc., a Delaware corporation having a principal place of business at 1050 Boyles Street, Bldg 428, Frederick, MD 21702-1201 have, along with others, made certain inventions as described and claimed in:

U.S. Provisional Patent Application No. 62/314,946, filed on March 29, 2016, entitled "RSV F IMMUNOGENS AND THEIR USE," and

PCT Patent Application No. PCT/US2017/024714, filed on March 29, 2017, entitled "RSV F IMMUNOGENS AND THEIR USE,"

both of which applications are collectively referred to herein as "**The Patent Application(s)**"; and

WHEREAS, I am the inventor named in **The Patent Application(s)**; and

WHEREAS, the inventions described and claimed in **The Patent Application(s)** 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 entire 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 Application(s)**;

NOW, THEREFORE, having the legal obligation to assign my right, title and interest in the inventions described and claimed in **The Patent Application(s)** 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 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 Application(s)** and any and all Letters Patent which may be granted thereon, and any and all continuations, divisions, reissues or extensions thereof; and


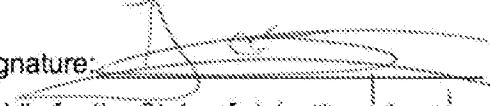
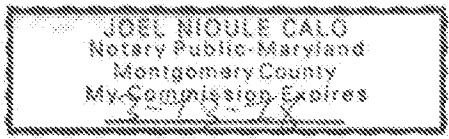
all rights to claim priority on the basis of **The Patent Application(s)** including but not limited to applications filed through the provisions of the Patent Cooperation Treaty ("PCT Applications"); and

all applications for Letters Patent that may be filed for any and all inventions described and claimed in **The Patent Application(s)** 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 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:

Inventor: Ulrich Baxa	
Date <u>7/5/17</u>	 Inventor Signature
County of <u>Montgomery</u>	
State of <u>Maryland</u>	
Subscribed and sworn to before me this <u>5th</u> day of <u>July</u> , 20 <u>17</u>	
Seal	Notary Signature: 
	Notary Public for the State of <u>Maryland</u>
	My Commission Expires: <u>8-18-2018</u>