NND 00

Docket No. 1758-4036US2

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applica	m(s)	•	MINE I II C., et al.	Group Art Ollit	•	1041
Serial N	lo.	:	09/120,044	Examiner	:	DEVI, S.
iled		:	July 21, 1998			
or		:	MODIFIED IMMUNOGENIC PNEUM	OLYSIN COMPO	SITION	IS AS VACCINES
		RECO	ORDATION FORM COVER SHEET PURS	UANT TO 37 C.F	.R. § 3.31	<u>l</u>
3OX A	ommissio SSIGNM gton, D.C	ENTS	atents and Trademarks			
Sir:						
F	Please rec	ord the a	ttached original documents or copy thereof.			
l. 1	Name of o	onveyin	g party/parties:			
_(	Conceicad	MINET	TTI - 14 Kathryn Street, Clark, New Jersey (	07066, U.S.A.		
	Francis M	ICHON	- 4401 Rosedale Avenue, Bethesda, Maryla	nd 20814, U.S.A.		**************************************
_]	leffrey K.	PULLE	N – 6928 Garland Lane, Columbia, Marylan	d 21045, U.S.A.		
_1	Mary Elle	n POLV	INO-BODNAR – 621 Rolling Dale Road, A	nnapolis, Marylar	d 21401	, U.S.A.
_5	Shu-Mei I	LIANG -	- 2 <sup>nd</sup> Floor, No. 48, Section 2, Academia Sin	ica Road, Nankan	g, Taipei	114 Taiwan, ROC
j	loseph Y.	TAI – 1	635 Limekiln Pike, Dresher, Pennsylvania	19025-1041, U.S.A	١.	
2. 1	Name and	l address	of receiving party/parties:			
1	Name _1	North An	nerican Vaccine, Inc.			
]	Internal A	ddress:				10-11-11-11-11-11-11-11-11-11-11-11-11-1
S	Street Ade	dress:	10150 Old Columbia Road			
(	City C	- olumbia	State Maryland	ZIP	21046	8
	-					40.00
					<del></del>	00000182
	Street Ad	-				<u>*</u>
(	City		State	ZIP		<u> </u>
I	]	Additio	onal names and addresses attached.			07/200 <b>6</b> JSHNBAZZ
519325_1	1					/07/200 FC:581

REEL: 010615 FRAME: 0674

3.	Name o	f conveyance:	[ ] Change	of Name	] Other	[ ] Security Agreement	
						mber 8, 1999; January 19,	
4.	Applica	tion Number(s)	or Patent Nur	nber(s):			
	[] Thi	s document is be	eing filed toge	ether with a nev	w application w	which was executed on	
	[X] Pate	ent Application	No.(s)0	9/120,044			
	[ ] Pate	ent No.(s)					<u>_</u>
<b>5</b> .	Address	all future comm	nunications to	:			
				ORGAN & FIN 345 Park New York, Nev	Avenue	<b>P</b> .	
6.	Total nu	ımber of applica	tions and pate	ents involved: _	one	444.	
7.	Total fe	e (37 CFR §3.41	l): \$40.00 pro	operty x 1 prop	erty(ies) = <b>\$</b> 4	40.00	
	[X]	A check in the	amount of \$4	0.00 to cover th	ne recordation	fee is enclosed.	
	[]	Charge fee to I	Deposit Accou	int No. 13-4500	O. Order No	·	
	[X]				- ,	litional fees which may be at No. 13-4500. Order No	•
8.		e best of my kno is a true copy of			oing informatio	on is true and correct and	any attached
					Respectful	ly submitted,	
					MORGAN	& FINNEGAN, L.L.P.	
Dated	: Februa	ry 3, 2000			Darryl H. S	yl H Stanovna Steensma on No. 43,155	
CORE	RESPON	DENCE ADDR	ESS:	Total number	of pages include	ding the recordation cover	sheet <u>32</u>
345 P New 3	ark Aven York, Ne	FINNEGAN, L.1 tue w York 10154 D / (212) 751-68					
FORM	M: REC-	PAT.NY / Rev.	05/26/98				

-2-

## ASSIGNMENT OF APPLICATION FOR PATENT

WHEREAS:
CONCEICAO MINETTI – 14 Kathryn Street, Clark, New Jersey 07066, U.S.A.
FRANCIS MICHON - 4401 Rosedale Avenue, Bethesda, Maryland 20814, U.S.A.
JEFFREY K. PULLEN - 6928 Garland Lane, Columbia, Maryland 21045, U.S.A.
MARY ELLEN POLVINO-BODNAR - 621 Rolling Dale Road, Annapolis, Maryland 21401, U.S.A.
SHU-MEI LIANG – 2 <sup>nd</sup> Floor, No. 48, Section 2 Academia Sinica Road, Nankang, Taipei – 115 Taiwan
JOSEPH Y. TAI – 1635 Limekiln Pike, Dresher, Pennsylvania 19025-1041 U.S.A.
(full name(s) and post office address(s) of inventor(s) (including country))
(hereinafter referred to as ASSIGNOR(S)), has made a discovery or invention entitled:
MODIFIED IMMUNOGENIC PNEUMOLYSIN COMPOSITIONS AS VACCINES
(title of discovery or invention)
[ ] for which application for Letters Patent of the United States has been executed on even date herewith,
[X] for which application for Letters Patent of the United States has been filed on <u>July 21, 1998</u> , under Serial No. <u>09/120,044</u> , and
WHEREAS:
NORTH AMERICAN VACCINE, INC. – 10150 OLD COLUMBIA ROAD, COLUMBIA, MARYLAND 21046
(name and address of assignee)
(hereinafter referred to as ASSIGNEE), is desirous of acquiring the entire interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States and in any and all foreign countries.
NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:
Be it known that in consideration of the payment by ASSIGNEE to ASSIGNOR(S) of the sum of One Dollar (\$ 1.00 ), the receipt of which is hereby acknowledged, and for other good and valuable consideration, ASSIGNOR(S) hereby sells, assigns and transfers to ASSIGNEE, its successors, legal representatives and assigns, the full and exclusive right, title and interest to said discovery or invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof in a foreign country

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for the full term or terms for which the same may be granted.

PATENT REEL: 010615 FRAME: 0676

I, SAID ASSIGNOR(S), hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and any Official of any country or countries foreign to the United States of America whose duty it is to issue Letters Patent on applications as aforesaid, to issue all such Letters Patent for said discovery or invention to the ASSIGNEE, as assignee of the entire right, title and interest in, to and under the same, for the sole use and behalf of the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

I, SAID, ASSIGNOR(S), hereby covenant that I have full right to convey the entire right, title and interest herein sold, assigned, transferred and set over;

AND I, SAID ASSIGNOR(S) hereby further covenant and agree that the ASSIGNEE, its successors, legal representatives, or assigns, may apply for foreign Letters Patent on said discovery or invention and claim the benefits of the International Convention, and that I will, at any time, when called upon to do so by the ASSIGNEE, its successors, legal representatives, or assigns, communicate to the ASSIGNEE, its successors, legal representatives, or assigns, as the case may be, any facts known to me respecting said discovery or invention, and execute and deliver any and all lawful papers that may be necessary or desireable to perfect the title to the said discovery or invention, the said applications and the said Letters Patent in the ASSIGNEE, its successors, legal representatives and assigns, and that if reissues of the said Letters Patent or disclaimers relating thereto, or divisions, continuations, or refilings of the said applications, or any thereof, shall hereafter be desired by the ASSIGNEE, its successors, legal representatives, or assigns, I will, at any time, when called up to do so by the ASSIGNEE, its successors, legal representatives, or assigns sign all lawful papers, make all rightful oaths, execute and deliver all such disclaimers and all divisional, continuation and reissue applications so desired, and do all lawful acts requisite for the application for such reissues and the procuring thereof and for the filing of such disclaimers and such applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention or discover in all countries, and without further compensation but at the expense of the ASSIGNEE, its successors, legal representatives and assigns.

Assignor's signature:	Co-Pl				
-	Conceicao First Name	Middle initial	Minetti Last name		
Citizenship: Brazil					
			<b>\</b>	h	

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal this 1010 day of November,

STATE OF NEW JERNY S.: COUNTY OF JUNIOUS

On this 1000 day of November, 1999, before me, the undersigned authority, personally appeared to me CONCEICAO MINETTI

known and known to me to be the individual who is described in and who executed the foregoing Assignment, and who duly acknowledged to me that he executed the same as his own voluntary act and deed for the uses and purposed therein specified.

Notary Public

PATRICIA L. DEITSCH

NOTARY PUBLIC OF NEW JERSEY My Commission Exp. May 21, 2002

Assignor's signatur	e:		
	Francis First Name	Middle initial	Michon Last name
Citizenship: Cana	nda		
IN WITNESS WHE	EREOF, I have hereunto s	et my hand and affixed my seal	this day of November, 1999.
STATE OF	)		
COUNTY OF	ss.: )		
	FRANCI	e me, the undersigned authority, S MICHON	
to me known and ka and who duly ackno purposed therein sp	owledged to me that he ex	vidual who is described in and we ecuted the same as his own volu	ho executed the foregoing Assignment, intary act and deed for the uses and
Notary Public			
Assignor's signatur			
	Jeffrey First Name	K. Middle initial	Pullen Last name
Citizenship: Unit	ed States of America		
IN WITNESS WHI	EREOF, I have hereunto s	et my hand and affixed my seal	this day of November, 1999.
STATE OF	)		
COUNTY OF	ss.: )		
On this day		re me, the undersigned authority Y.K. PULLEN	, personally appeared
to me known and k and who duly ackno purposed therein sp	owledged to me that he ex	vidual who is described in and we ecuted the same as his own volu	who executed the foregoing Assignment, intary act and deed for the uses and
Notary Public			

Assignor's signatur	re:		
	Mary	Ellen	Polvino-Bodnar
	First Name	Middle initial	Last name
Citizenship: Uni	ted States of America		
IN WITNESS WH	EREOF, I have hereunto s	et my hand and affixed my seal	this day of November, 1999.
STATE OF	)		
COUNTY OF	ss.: )		
On this day	of November, 1999, befor	e me, the undersigned authority	, personally appeared to me
	MARY ELLEN PO		. 1.1 6
known and known	to me to be the individual	who is described in and who ex	recuted the foregoing Assignment, and
who duly acknowled purposed therein sp		ed the same as his own voluntar	ry act and deed for the uses and
purposeu merem s	pecmeu.		
National Deskiller			
Notary Public			
Assignor's signatu	re'		
rissignor s signatu	Shu-Mei		Liang
	First Name	Middle initial	Last name
Citizenship: Uni	ted States of America		
IN WITNESS WH	EREOF. I have hereunto s	et my hand and affixed my seal	this day of November, 1999.
111 11111111111111111111111111111111111		· · · · · · · · · · · · · · · · · · ·	
STATE OF	,		
STATE OF	) ss.:		
COUNTY OF	)		
COONTTO	,		
On this day	of November, 1999, befor SHU-MEI LIANG	e me, the undersigned authority	, personally appeared
to me known and I	known to me to be the indi-	vidual who is described in and v	who executed the foregoing Assignment,
and who duly ackr	nowledged to me that he ex	ecuted the same as his own vol	untary act and deed for the uses and
purposed therein s	pecified.		
Mataur Dublic	- All All All All All All All All All Al		
Notary Public			

Assignor's signat	ture:		
	Joseph	Υ.	Tai
	First Name	Middle initial	Last name
Citizenship: <u>U</u>	nited States of America		
IN WITNESS W	HEREOF, I have hereunto s	et my hand and affixed my sea	day of November, 1999.
STATE OF	) ss.:		
COUNTY OF	)		
to me known and	JOSEPH I known to me to be the indi knowledged to me that he ex	vidual who is described in and	y, personally appeared who executed the foregoing Assignment, luntary act and deed for the uses and
Notary Public			
FORM: ASSIGN. PA Rev. 07/29/99	AT		

- 5 -

#### ASSIGNMENT OF APPLICATION FOR PATENT

WHEREAS:
CONCEICAO MINETTI – 3904 Isbell Street, Silver Spring, Maryland 20906, U.S.A.
FRANCIS MICHON – 4401 Rosedale Avenue, Bethesda, Maryland 20814, U.S.A.
JEFFREY K. PULLEN – 6928 Garland Lane, Columbia, Maryland 21045, U.S.A.
MARY ELLEN POLVINO-BODNAR – 621 Rolling Dale Road, Annapolis, Maryland 21401, U.S.A.
SHU-MEI LIANG – 2 <sup>nd</sup> Floor, No. 48, Section 2 Academia Sinica Road, Nankang, Taipei – 115 Taiwan
JOSEPH Y. TAI – 1530 Kriebel Mill Road, Collegeville, Pennsylvania 19426, U.S.A.  (full name(s) and post office address(s) of inventor(s) (including country))
(full name(s) and post office address(s) of inventor(s) (including country))
(hereinafter referred to as ASSIGNOR(S)), has made a discovery or invention entitled:
MODIFIED IMMUNOGENIC PNEUMOLYSIN COMPOSITIONS AS VACCINES
(title of discovery or invention)
[ ] for which application for Letters Patent of the United States has been executed on even date herewith,
[X] for which application for Letters Patent of the United States has been filed on <u>July 21, 1998</u> , under Serial No. <u>09/120,044</u> , and
WHEREAS:
NORTH AMERICAN VACCINE, INC. – 10150 OLD COLUMBIA ROAD, COLUMBIA, MARYLAND 21046 (name and address of assignee)
(hereinafter referred to as ASSIGNEE), is desirous of acquiring the entire interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

Be it known that in consideration of the payment by ASSIGNEE to ASSIGNOR(S) of the sum of One Dollar (\$ 1.00 ), the receipt of which is hereby acknowledged, and for other good and valuable consideration, ASSIGNOR(S) hereby sells, assigns and transfers to ASSIGNEE, its successors, legal representatives and assigns, the full and exclusive right, title and interest to said discovery or invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof in a foreign country for the full term or terms for which the same may be granted.

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PATENT REEL: 010615 FRAME: 0681

- I, SAID ASSIGNOR(S), hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and any Official of any country or countries foreign to the United States of America whose duty it is to issue Letters Patent on applications as aforesaid, to issue all such Letters Patent for said discovery or invention to the ASSIGNEE, as assignee of the entire right, title and interest in, to and under the same, for the sole use and behalf of the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.
- I, SAID, ASSIGNOR(S), hereby covenant that I have full right to convey the entire right, title and interest herein sold, assigned, transferred and set over;

AND I, SAID ASSIGNOR(S) hereby further covenant and agree that the ASSIGNEE, its successors, legal representatives, or assigns, may apply for foreign Letters Patent on said discovery or invention and claim the benefits of the International Convention, and that I will, at any time, when called upon to do so by the ASSIGNEE, its successors, legal representatives, or assigns, communicate to the ASSIGNEE, its successors, legal representatives, or assigns, as the case may be, any facts known to me respecting said discovery or invention, and execute and deliver any and all lawful papers that may be necessary or desireable to perfect the title to the said discovery or invention, the said applications and the said Letters Patent in the ASSIGNEE, its successors, legal representatives and assigns, and that if reissues of the said Letters Patent or disclaimers relating thereto, or divisions, continuations, or refilings of the said applications, or any thereof, shall hereafter be desired by the ASSIGNEE, its successors, legal representatives, or assigns, I will, at any time, when called up to do so by the ASSIGNEE, its successors, legal representatives, or assigns sign all lawful papers, make all rightful oaths, execute and deliver all such disclaimers and all divisional, continuation and reissue applications so desired, and do all lawful acts requisite for the application for such reissues and the procuring thereof and for the filing of such disclaimers and such applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention or discover in all countries, and without further compensation but at the expense of the ASSIGNEE, its successors, legal representatives and assigns.

Assignor's sig	gnature: _			
		Conceicao		Minetti
		First Name	Middle initial	Last name
Citizenship:	Brazil			
IN WITNESS	S WHERE	OF, I have hereunto	set my hand and affixed my seal th	is day of November, 1999.
STATE OF		)		
COUNTY O	F	ss.: )		
On this	_ day of N		Fore me, the undersigned authority, presented in the control of th	personally appeared to me
	mowledge	te to be the individual to me that he exec		uted the foregoing Assignment, and act and deed for the uses and
Notary Public	c	<del></del>		

Assignor's signature:	Francis Jean		Michon	
<del>7</del>	Francis First Name	Middle initial	Michon Last name	
Citizenship: Canada				
IN WITNESS WHERE	OF, I have hereunto set my h	and and affixed my seal this	day of November, 1999.	
STATE OF MD	)			
COUNTY OF HOW	ss 24)			
On this 6 day of N	ovember, 1999, before me, th FRANCIS MICH	ne undersigned authority, person	nally appeared	
and who duly acknowle	edged to me that he executed	who is described in and who exe the same as his own voluntary a		
Notary Public	nnMfCready		VIRGINIA ANN MCCREADY NOTARY PUBLIC STATE OF MARYLAND My Commission Expires May 1, 2000	
Assignor's signature: _	Jeffrey First Name	K. Middle initial	Pullen Last name	
Citizenship: United S			Lust name	
IN WITNESS WHERE	OF, I have hereunto set my h	and and affixed my seal this	day of November, 1999.	
STATE OF	) ss.:			
COUNTY OF	)			
On this 5 day of N	Jovember, 1999, before me, the JEFFREY K. PU	he undersigned authority, perso ILLEN	nally appeared	
	dged to me that he executed t	who is described in and who exe the same as his own voluntary a	ecuted the foregoing Assignment, act and deed for the uses and	
Notary Public	•			

Assignor's si	gnature: Mary	Ellen	Polvino-Bodnar
	First Name	Middle initial	Last name
Citizenship:	United States of America		
IN WITNESS	S WHEREOF, I have hereunto s	et my hand and affixed my seal	this day of November, 1999.
STATE OF	)		
COUNTY O	ss.: F )		
known and ki who duly ack	day of November, 1999, beform MARY ELLEN POI nown to me to be the individual mowledged to me that he executive rein specified.	LVINO-BODNAR who is described in and who ex	ecuted the foregoing Assignment, and
Notary Public			
Assignor s si	Shu-Mei First Name	Middle initial	Liang Last name
Citizenship:	United States of America		
IN WITNESS	S WHEREOF, I have hereunto s	et my hand and affixed my seal	this day of November, 1999.
STATE OF	) ss.:		
COUNTY O			
	_ day of November, 1999, befor SHU-MEI LIANG		
and who duly			who executed the foregoing Assignmen untary act and deed for the uses and
Notary Public	c		

Assignor's si	gnature:		
	Joseph	Y.	Tai
	First Name	Middle initial	Last name
Citizenship:	United States of America		
IN WITNESS	S WHEREOF, I have hereunto s	et my hand and affixed my sea	l this day of November, 1999.
STATE OF	) ss.:		
COUNTY O			
On this	_ day of November, 1999, befor JOSEPH		y, personally appeared
and who duly			who executed the foregoing Assignment, untary act and deed for the uses and
Notary Public	c		

- 5 -

FORM: ASSIGN. PAT Rev. 07/29/99

## ASSIGNMENT OF APPLICATION FOR PATENT

	WHEREAS:
_	CONCEICAO MINETTI – 3904 Isbell Street, Silver Spring, Maryland 20906, U.S.A.
_	FRANCIS MICHON - 4401 Rosedale Avenue, Bethesda, Maryland 20814, U.S.A.
_	JEFFREY K. PULLEN - 6928 Garland Lane, Columbia, Maryland 21045, U.S.A.
_	MARY ELLEN POLVINO-BODNAR – 621 Rolling Dale Road, Annapolis, Maryland 21401, U.S.A.
_	SHU-MEI LIANG – 2 <sup>nd</sup> Floor, No. 48, Section 2 Academia Sinica Road, Nankang, Taipei – 115 Taiwan
_	JOSEPH Y. TAI – 1635 Limekiln Pike, Dresher, Pennsylvania 19025-1041 U.S.A.
	(full name(s) and post office address(s) of inventor(s) (including country))
	(hereinafter referred to as ASSIGNOR(S)), has made a discovery or invention entitled:
_	MODIFIED IMMUNOGENIC PNEUMOLYSIN COMPOSITIONS AS VACCINES
_	(title of discovery or invention)
	[ ] for which application for Letters Patent of the United States has been executed on even date herewith,
	[X] for which application for Letters Patent of the United States has been filed on <u>July 21, 1998</u> , under Serial No. <u>09/120,044</u> , and
	WHEREAS:
_	NORTH AMERICAN VACCINE, INC. – 10150 OLD COLUMBIA ROAD, COLUMBIA, MARYLAND 21046 (name and address of assignee)
	(hereinafter referred to as ASSIGNEE), is desirous of acquiring the entire interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States and in any and all foreign countries.
	NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:
	Be it known that in consideration of the payment by ASSIGNEE to ASSIGNOR(S) of the sum of One Dollar (\$ 1.00 ), the receipt of which is hereby acknowledged, and for other good and valuable consideration, ASSIGNOR(S) hereby sells, assigns and transfers to ASSIGNEE, its successors, legal representatives and assigns, the full and exclusive right, title and interest to said discovery or invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof in a foreign country for the full term or terms for which the same may be granted.

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PATENT REEL: 010615 FRAME: 0686 I, SAID ASSIGNOR(S), hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and any Official of any country or countries foreign to the United States of America whose duty it is to issue Letters Patent on applications as aforesaid, to issue all such Letters Patent for said discovery or invention to the ASSIGNEE, as assignee of the entire right, title and interest in, to and under the same, for the sole use and behalf of the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

I, SAID, ASSIGNOR(S), hereby covenant that I have full right to convey the entire right, title and interest herein sold, assigned, transferred and set over;

AND I, SAID ASSIGNOR(S) hereby further covenant and agree that the ASSIGNEE, its successors, legal representatives, or assigns, may apply for foreign Letters Patent on said discovery or invention and claim the benefits of the International Convention, and that I will, at any time, when called upon to do so by the ASSIGNEE, its successors, legal representatives, or assigns, communicate to the ASSIGNEE, its successors, legal representatives, or assigns, as the case may be, any facts known to me respecting said discovery or invention, and execute and deliver any and all lawful papers that may be necessary or desireable to perfect the title to the said discovery or invention, the said applications and the said Letters Patent in the ASSIGNEE, its successors, legal representatives and assigns, and that if reissues of the said Letters Patent or disclaimers relating thereto, or divisions, continuations, or refilings of the said applications, or any thereof, shall hereafter be desired by the ASSIGNEE, its successors, legal representatives, or assigns, I will, at any time, when called up to do so by the ASSIGNEE, its successors, legal representatives, or assigns sign all lawful papers, make all rightful oaths, execute and deliver all such disclaimers and all divisional, continuation and reissue applications so desired, and do all lawful acts requisite for the application for such reissues and the procuring thereof and for the filing of such disclaimers and such applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention or discover in all countries, and without further compensation but at the expense of the ASSIGNEE, its successors, legal representatives and assigns.

Assignor's sign	gnature:			
	_	Conceicao		Minetti
		First Name	Middle initial	Last name
Citizenship:	Brazil			
IN WITNESS	S WHERE	EOF, I have hereunto	set my hand and affixed my seal th	is day of November, 1999.
STATE OF		)		
		ss.:		
COUNTY O	F	)		
On this	_ day of 1		fore me, the undersigned authority, p	personally appeared to me
known and k who duly ack purposed the	cnowledge	ed to me that he exec	al who is described in and who executed the same as his own voluntary	uted the foregoing Assignment, and act and deed for the uses and
Notary Publi	c			

Assignor's signature:	Francis		N # : -1	
	Francis First Name	Middle initial	Michon Last name	
Citizenship: Canada	ì			<del></del>
IN WITNESS WHER	EOF, I have hereunto s	set my hand and affixed my sea	al this day of N	lovember, 1999.
STATE OF	)			
COUNTY OF	ss.: )			
	FRANCI	re me, the undersigned authorit IS MICHON		
	ledged to me that he ex	vidual who is described in and secuted the same as his own vo		
Notary Public			$\bigcap M$	
Assignor's signature:	Jeffrey First Name	K. Middle initial	Pullen Last name	100. 24, 190
Citizenship: United	,			
IN WITNESS WHER	EOF, I have hereunto s	set my hand and affixed my sea	al this day of N	lovember, 1999.
STATE OF	)			
COUNTY OF	ss.: )			
On this day of		re me, the undersigned authori Y K. PULLEN	ty, personally appeared	
	wn to me to be the individed and to me that he ex	vidual who is described in and secuted the same as his own vo		
Notary Public				

Assignor's signature:	Mary	Ellen	Polvino-Bodnar
	First Name	Middle initial	Last name
Citizenship: United	States of America		
IN WITNESS WHER	EOF, I have hereunto s	et my hand and affixed my sea	l this day of November, 1999.
STATE OF	)		
COUNTY OF	ss.: )		
On this day of l	November, 1999, befor MARY ELLEN POI	e me, the undersigned authority LVINO-BODNAR	y, personally appeared to me
	me to be the individual ed to me that he execut	who is described in and who ex	xecuted the foregoing Assignment, and arry act and deed for the uses and
Notary Public			
Assignor's signature:	Shu-Mei First Name	Middle initial	Liang Last name
Citizenship: United	States of America		
IN WITNESS WHER	EOF, I have hereunto s	et my hand and affixed my sea	1 this day of November, 1999.
STATE OF	) ss.:		
COUNTY OF	)		
	SHU-MEI LIANG	re me, the undersigned authority	
	ledged to me that he ex		who executed the foregoing Assignment luntary act and deed for the uses and
Notary Public			

Assignor's sig			
	Joseph First Name	Y. Middle initial	Tai Last name
Citizenship: _	United States of America		
IN WITNESS	WHEREOF, I have hereunto s	eet my hand and affixed my sea	It this day of November, 1999.
STATE OF	) ss.:		
COUNTY OF			
On this	day of November, 1999, befor		y, personally appeared
to me known and who duly purposed there	and known to me to be the indi acknowledged to me that he ex	vidual who is described in and	who executed the foregoing Assignment, luntary act and deed for the uses and
Notary Public	<del></del>		

FORM: ASSIGN. PAT Rev. 07/29/99

#### ASSIGNMENT OF APPLICATION FOR PATENT

WHEREAS:					
CONCEICAO MINETTI – 3904 Isbell Street, Silver Spring, Maryland 20906, U.S.A.					
FRANCIS MICHON – 4401 Rosedale Avenue, Bethesda, Maryland 20814, U.S.A.					
JEFFREY K. PULLEN - 6928 Garland Lane, Columbia, Maryland 21045, U.S.A.					
MARY ELLEN POLVINO-BODNAR – 621 Rolling Dale Road, Annapolis, Maryland 21401, U.S.A.					
SHU-MEI LIANG – 2 <sup>nd</sup> Floor, No. 48, Section 2 Academia Sinica Road, Nankang, Taipei – 115 Taiwan					
JOSEPH Y. TAI – 1635 Limekiln Pike, Dresher, Pennsylvania 19025-1041 U.S.A.					
(full name(s) and post office address(s) of inventor(s) (including country))					
(hereinafter referred to as ASSIGNOR(S)), has made a discovery or invention entitled:					
MODIFIED IMMUNOGENIC PNEUMOLYSIN COMPOSITIONS AS VACCINES					
(title of discovery or invention)					
[ ] for which application for Letters Patent of the United States has been executed on even date herewith,					
[X] for which application for Letters Patent of the United States has been filed on <u>July 21, 1998</u> , under Serial No. <u>09/120,044</u> , and					
WHEREAS:					
NORTH AMERICAN VACCINE, INC. – 10150 OLD COLUMBIA ROAD, COLUMBIA, MARYLAND 21046					
(name and address of assignee)					
(hereinafter referred to as ASSIGNEE), is desirous of acquiring the entire interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States and in any and all foreign countries					

## NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

Be it known that in consideration of the payment by ASSIGNEE to ASSIGNOR(S) of the sum of One Dollar (\$ 1.00 ), the receipt of which is hereby acknowledged, and for other good and valuable consideration, ASSIGNOR(S) hereby sells, assigns and transfers to ASSIGNEE, its successors, legal representatives and assigns, the full and exclusive right, title and interest to said discovery or invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof in a foreign country for the full term or terms for which the same may be granted.

500112 1

PATENT REEL: 010615 FRAME: 0691

Docket No. 1758-4036 US2

I, SAID ASSIGNOR(S), hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and any Official of any country or countries foreign to the United States of America whose duty it is to issue Letters Patent on applications as aforesaid, to issue all such Letters Patent for said discovery or invention to the ASSIGNEE, as assignee of the entire right, title and interest in, to and under the same, for the sole use and behalf of the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

I, SAID, ASSIGNOR(S), hereby covenant that I have full right to convey the entire right, title and interest herein sold, assigned, transferred and set over;

AND I, SAID ASSIGNOR(S) hereby further covenant and agree that the ASSIGNEE, its successors, legal representatives, or assigns, may apply for foreign Letters Patent on said discovery or invention and claim the benefits of the International Convention, and that I will, at any time, when called upon to do so by the ASSIGNEE, its successors, legal representatives, or assigns, communicate to the ASSIGNEE, its successors, legal representatives, or assigns, as the case may be, any facts known to me respecting said discovery or invention, and execute and deliver any and all lawful papers that may be necessary or desireable to perfect the title to the said discovery or invention, the said applications and the said Letters Patent in the ASSIGNEE, its successors, legal representatives and assigns, and that if reissues of the said Letters Patent or disclaimers relating thereto, or divisions, continuations, or refilings of the said applications, or any thereof, shall hereafter be desired by the ASSIGNEE, its successors, legal representatives, or assigns, I will, at any time, when called up to do so by the ASSIGNEE, its successors, legal representatives, or assigns sign all lawful papers, make all rightful oaths, execute and deliver all such disclaimers and all divisional, continuation and reissue applications so desired, and do all lawful acts requisite for the application for such reissues and the procuring thereof and for the filing of such disclaimers and such applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention or discover in all countries, and without further compensation but at the expense of the ASSIGNEE, its successors, legal representatives and assigns.

Assignor's sig	gnature:				
	_	Conceicao		Minetti	
		First Name	Middle initial	Last name	
Citizenship:	Brazil				
IN WITNESS	S WHERI	EOF, I have hereunto	set my hand and affixed my seal t	nis day of November,	1999.
STATE OF		) ss.:			
COUNTY O	F	)			
On this	_ day of 1		ore me, the undersigned authority, EICAO MINETTI	personally appeared to me	
	nowledge	ne to be the individua ed to me that he execu	l who is described in and who exe ated the same as his own voluntary		, and
Notary Public	c				

Assignor's si	gnature:			
	-	Francis First Name	Middle initial	Michon Last name
Citizenship:	Canada			
IN WITNESS	S WHERE	EOF, I have hereunto	set my hand and affixed my seal thi	s day of November, 1999.
STATE OF		)		
COUNTY O	F	ss.: )		
to me known	and know	FRANC on to me to be the ind	ore me, the undersigned authority, per EIS MICHON ividual who is described in and who excuted the same as his own volunt	executed the foregoing Assignment,
purposed ther				
Notary Public	2			
Assignor's sig	gnature: _	Jeffrey	K.	Pullen
		First Name	Middle initial	Last name
Citizenship:	United S	States of America		
IN WITNESS	S WHERE	EOF, I have hereunto	set my hand and affixed my seal thi	s day of November, 1999.
STATE OF		)		
COUNTY OF	7	ss.: )		
On this	_day of 1		ore me, the undersigned authority, party K. PULLEN	ersonally appeared
	acknowle	edged to me that he e	ividual who is described in and who xecuted the same as his own volunta	executed the foregoing Assignment, ary act and deed for the uses and
Notary Public				

Assignor's sign	nature: Mary First Name	Ellen Middle initial	Polvino-Bodnar Last name	18/99
Citizenship: _	United States of America			
IN WITNESS	WHEREOF, I have hereunto s	et my hand and affixed my sea	l this day of November	, 1999.
STATE OF	) ss.:			
COUNTY OF	)			
known and kno	owledged to me that he execut	LVINO-BODNAR who is described in and who e	y, personally appeared to me xecuted the foregoing Assignmentary act and deed for the uses and	at, and
Notary Public				
Assignor's sign				
	Shu-Mei First Name	Middle initial	Liang Last name	
Citizenship: _	United States of America			
IN WITNESS	WHEREOF, I have hereunto s	et my hand and affixed my sea	l this day of November	, 1999.
STATE OF	) ss.:			
COUNTY OF	)			
to me known a	acknowledged to me that he ex	vidual who is described in and	y, personally appeared who executed the foregoing Assi luntary act and deed for the uses	
Notary Public				

Assignor's sig	gnature:		
	Joseph First Name	Y. Middle initial	Tai Last name
Citizenship:	United States of America		
IN WITNESS	S WHEREOF, I have hereunto	set my hand and affixed my seal	this day of November, 1999.
STATE OF	) ss.:		
COUNTY O			
On this		ore me, the undersigned authority H Y. TAI	, personally appeared
and who duly	and known to me to be the in-	dividual who is described in and v	who executed the foregoing Assignment, untary act and deed for the uses and
Notary Public	c		

FORM: ASSIGN. PAT Rev. 07/29/99

#### ASSIGNMENT OF APPLICATION FOR PATENT

WHEREAS:	
CONCEICAO MINETTI – 3904 Isbell Street, Silver Spring, Maryland 20906, U.S.A.	
FRANCIS MICHON - 4401 Rosedale Avenue, Bethesda, Maryland 20814, U.S.A.	
JEFFREY K. PULLEN – 6928 Garland Lane, Columbia, Maryland 21045, U.S.A.	
MARY ELLEN POLVINO-BODNAR - 621 Rolling Dale Road, Annapolis, Maryland 21401, U.	.S.A.
SHU-MEI LIANG – 2 <sup>nd</sup> Floor, No. 48, Section 2 Academia Sinica Road, Nankang, Taipei – 115	Taiwan
JOSEPH Y. TAI – 1635 Limekiln Pike, Dresher, Pennsylvania 19025-1041 U.S.A.	
(full name(s) and post office address(s) of inventor(s) (including country))	
(hereinafter referred to as ASSIGNOR(S)), has made a discovery or invention entitled:	
MODIFIED IMMUNOGENIC PNEUMOLYSIN COMPOSITIONS AS VACCINES	
(title of discovery or invention)	
[ ] for which application for Letters Patent of the United States has been executed on even date l	herewith,
[X] for which application for Letters Patent of the United States has been filed on <u>July 21, 1998</u> , No. <u>09/120,044</u> , and	under Serial
WHEREAS:	
NORTH AMERICAN VACCINE, INC. – 10150 OLD COLUMBIA ROAD, COLUMBIA, MARY	LAND 21046
(name and address of assignee)	
(hereinafter referred to as ASSIGNEE), is desirous of acquiring the entire interest in, to and under said in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States a all foreign countries.	d invention and and in any and
NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:	

Be it known that in consideration of the payment by ASSIGNEE to ASSIGNOR(S) of the sum of One Dollar (\$ 1.00 ), the receipt of which is hereby acknowledged, and for other good and valuable consideration, ASSIGNOR(S) hereby sells, assigns and transfers to ASSIGNEE, its successors, legal representatives and assigns, the full and exclusive right, title and interest to said discovery or invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof in a foreign country for the full term or terms for which the same may be granted.

500112\_1

PATENT REEL: 010615 FRAME: 0696

Docket No. 1758-4036 US2

I, SAID ASSIGNOR(S), hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and any Official of any country or countries foreign to the United States of America whose duty it is to issue Letters Patent on applications as aforesaid, to issue all such Letters Patent for said discovery or invention to the ASSIGNEE, as assignee of the entire right, title and interest in, to and under the same, for the sole use and behalf of the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

I, SAID, ASSIGNOR(S), hereby covenant that I have full right to convey the entire right, title and interest herein sold, assigned, transferred and set over;

AND I, SAID ASSIGNOR(S) hereby further covenant and agree that the ASSIGNEE, its successors, legal representatives, or assigns, may apply for foreign Letters Patent on said discovery or invention and claim the benefits of the International Convention, and that I will, at any time, when called upon to do so by the ASSIGNEE, its successors, legal representatives, or assigns, communicate to the ASSIGNEE, its successors, legal representatives, or assigns, as the case may be, any facts known to me respecting said discovery or invention, and execute and deliver any and all lawful papers that may be necessary or desireable to perfect the title to the said discovery or invention, the said applications and the said Letters Patent in the ASSIGNEE, its successors, legal representatives and assigns, and that if reissues of the said Letters Patent or disclaimers relating thereto, or divisions, continuations, or refilings of the said applications, or any thereof, shall hereafter be desired by the ASSIGNEE, its successors, legal representatives, or assigns, I will, at any time, when called up to do so by the ASSIGNEE, its successors, legal representatives, or assigns sign all lawful papers, make all rightful oaths, execute and deliver all such disclaimers and all divisional, continuation and reissue applications so desired, and do all lawful acts requisite for the application for such reissues and the procuring thereof and for the filing of such disclaimers and such applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention or discover in all countries, and without further compensation but at the expense of the ASSIGNEE, its successors, legal representatives and assigns.

Assignor's si	gnature:			
-		Conceicao		Minetti
		First Name	Middle initial	Last name
Citizenship:	Brazil			
IN WITNESS	S WHERE	EOF, I have hereunto	set my hand and affixed my seal thi	s day of November, 1999.
STATE OF		)		
COUNTY O	F	ss.: )		
On this	_ day of 1		Fore me, the undersigned authority, pEICAO MINETTI	ersonally appeared to me
	nowledge	ed to me that he execu	al who is described in and who executed the same as his own voluntary a	
Notary Publi	c			

	Francis First Name	Middle initial	Michon Last name
itizenship: Cana			Sust name
1			
N WITNESS WHI	EREOF, I have hereunto	set my hand and affixed my seal	this day of November, 1999.
TATE OF	)		
COUNTY OF	ss.: )		
on this day		re me, the undersigned authority IS MICHON	, personally appeared
	nown to me to be the indi owledged to me that he ex	vidual who is described in and v	who executed the foregoing Assignment untary act and deed for the uses and
Notary Public			
·			
Assignor's signatur		***	75. 41
	Jeffrey First Name	K. Middle initial	Pullen Last n <b>a</b> me
litizenshin: Unit	ed States of America		
		·	
N WITNESS WHI	EREOF, I have hereunto	set my hand and affixed my seal	this day of November, 1999.
TATE OF	)		
COUNTY OF	ss.:		
JONI I OF	)		
On this day o		ore me, the undersigned authority Y K. PULLEN	y, personally appeared
	nown to me to be the indi owledged to me that he ex	vidual who is described in and v	who executed the foregoing Assignment untary act and deed for the uses and
- <b>^</b>			
Jotary Public			

Assignor's signatur	e:		
	Mary First Name	Ellen Middle initial	Polvino-Bodnar Last name
Citizenship: Unit	ed States of America		
IN WITNESS WHI	EREOF, I have hereunto se	t my hand and affixed my seal	this day of November, 1999.
STATE OF	) ss.:		
COUNTY OF	)		
known and known t	MARY ELLEN POL' to me to be the individual widged to me that he execute	vho is described in and who ex	, personally appeared to me ecuted the foregoing Assignment, and ry act and deed for the uses and
Notary Public Assignor's signatur	e: X Shu-Mei Shu-Mei First Name	Me Lia	Liang Last name
Citizenship: Unit	ed States of America		S. f.
IN WITNESS WHI	EREOF, I have hereunto se	t my hand and affixed my seal	this 151 day of November, 1999.
STATE OF $\mathcal{N}_{\cdot}$	<b>ナ</b> )		
COUNTY OF M			
On thisday of	TeC: of N <del>ovem</del> ber, 1999, before SHU-MEI LIANG	me, the undersigned authority	, personally appeared
	nown to me to be the indivi owledged to me that he exe		who executed the foregoing Assignment, untary act and deed for the uses and
motary r done	FRANK SH	<b>KE</b> M	

NOTARY PUBLIC OF NEW Jangay
My Commission Expires Dec. 11, 1999

Assignor's sig	gnature:		
	Joseph	Y.	Tai
	First Name	Middle initial	Last name
Citizenship:	United States of America		
IN WITNESS	S WHEREOF, I have hereunto	set my hand and affixed my seal	this day of November, 1999.
STATE OF	) ss.:		
COUNTY OF			
On this	day of November, 1999, befo JOSEPH	re me, the undersigned authority	, personally appeared
	and known to me to be the indi	vidual who is described in and	who executed the foregoing Assignment,
•	rein specified.	Recuted the same as his own vol	untary act and deed for the uses and
Notary Public	2		
FORM: ASSIGN Rev. 07/29/99	N. PAT		

## ASSIGNMENT OF APPLICATION FOR PATENT

,	WHEREAS:
	CONCEICAO MINETTI – 3904 Isbell Street, Silver Spring, Maryland 20906, U.S.A.
_]	FRANCIS MICHON – 4401 Rosedale Avenue, Bethesda, Maryland 20814, U.S.A.
	JEFFREY K. PULLEN - 6928 Garland Lane, Columbia, Maryland 21045, U.S.A.
_]	MARY ELLEN POLVINO-BODNAR – 621 Rolling Dale Road, Annapolis, Maryland 21401, U.S.A.
_;	SHU-MEI LIANG – 2 <sup>nd</sup> Floor, No. 48, Section 2 Academia Sinica Road, Nankang, Taipei – 115 Taiwan
	JOSEPH Y. TAI – 1635 Limekiln Pike, Dresher, Pennsylvania 19025-1041 U.S.A.
(	(full name(s) and post office address(s) of inventor(s) (including country))
(	(hereinafter referred to as ASSIGNOR(S)), has made a discovery or invention entitled:
_]	MODIFIED IMMUNOGENIC PNEUMOLYSIN COMPOSITIONS AS VACCINES
-	(title of discovery or invention)
	[ ] for which application for Letters Patent of the United States has been executed on even date herewith,
ı	[X] for which application for Letters Patent of the United States has been filed on <u>July 21, 1998</u> , under Serial No. <u>09/120,044</u> , and
7	WHEREAS:
_	NORTH AMERICAN VACCINE, INC. – 10150 OLD COLUMBIA ROAD, COLUMBIA, MARYLAND 21046 (name and address of assignee)
j	(hereinafter referred to as ASSIGNEE), is desirous of acquiring the entire interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States and in any and all foreign countries.
]	NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:
1	Be it known that in consideration of the payment by ASSIGNEE to ASSIGNOR(S) of the sum of One Dollar (\$ 1.00 ), the receipt of which is hereby acknowledged, and for other good and valuable consideration, ASSIGNOR(S) hereby sells, assigns and transfers to ASSIGNEE, its successors, legal representatives and assigns, the full and exclusive right, title and interest to said discovery or invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and

its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof in a foreign country

for the full term or terms for which the same may be granted.

500112\_1

PATENT REEL: 010615 FRAME: 0701

- I, SAID ASSIGNOR(S), hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and any Official of any country or countries foreign to the United States of America whose duty it is to issue Letters Patent on applications as aforesaid, to issue all such Letters Patent for said discovery or invention to the ASSIGNEE, as assignee of the entire right, title and interest in, to and under the same, for the sole use and behalf of the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.
- I, SAID, ASSIGNOR(S), hereby covenant that I have full right to convey the entire right, title and interest herein sold, assigned, transferred and set over;

AND I, SAID ASSIGNOR(S) hereby further covenant and agree that the ASSIGNEE, its successors, legal representatives, or assigns, may apply for foreign Letters Patent on said discovery or invention and claim the benefits of the International Convention, and that I will, at any time, when called upon to do so by the ASSIGNEE, its successors, legal representatives, or assigns, communicate to the ASSIGNEE, its successors, legal representatives, or assigns, as the case may be, any facts known to me respecting said discovery or invention, and execute and deliver any and all lawful papers that may be necessary or desireable to perfect the title to the said discovery or invention, the said applications and the said Letters Patent in the ASSIGNEE, its successors, legal representatives and assigns, and that if reissues of the said Letters Patent or disclaimers relating thereto, or divisions, continuations, or refilings of the said applications, or any thereof, shall hereafter be desired by the ASSIGNEE, its successors, legal representatives, or assigns, I will, at any time, when called up to do so by the ASSIGNEE, its successors, legal representatives, or assigns sign all lawful papers, make all rightful oaths, execute and deliver all such disclaimers and all divisional, continuation and reissue applications so desired, and do all lawful acts requisite for the application for such reissues and the procuring thereof and for the filing of such disclaimers and such applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention or discover in all countries, and without further compensation but at the expense of the ASSIGNEE, its successors, legal representatives and assigns.

Assignor's sign	gnature:				
	_	Conceicao		Minetti	
		First Name	Middle initial	Last name	
Citizenship:	Brazil				
IN WITNESS	S WHERE	OF, I have hereunto	set my hand and affixed my seal th	is day of November, 1999	}.
STATE OF		) ss.:			
COUNTY O	F	)			
On this	_day of 1		ore me, the undersigned authority, particles of the control of the	personally appeared to me	
	nowledge	ne to be the individuand to me that he exec		uted the foregoing Assignment, and act and deed for the uses and	Į
Notary Public	e				

Assignor's signature	o:		
_	Francis First Name	Middle initial	Michon Last name
Citizenship: Cana	da		
IN WITNESS WHE	REOF, I have hereunto s	set my hand and affixed my seal	this day of November, 1999.
STATE OF	)		
COUNTY OF	ss.: )		
On this day o		re me, the undersigned authority	, personally appeared
	own to me to be the indi- wledged to me that he ex	vidual who is described in and v	who executed the foregoing Assignment, untary act and deed for the uses and
Notary Public			
Assignor's signature			
	Jeffrey First Name	K. Middle initial	Pullen Last name
Citizenship: Unite	ed States of America		
IN WITNESS WHE	REOF, I have hereunto s	set my hand and affixed my seal	this day of November, 1999.
STATE OF	) ss.:		
COUNTY OF	)		
On this day o		re me, the undersigned authority Y K. PULLEN	y, personally appeared
	nown to me to be the indi wledged to me that he ex	vidual who is described in and v	who executed the foregoing Assignment, untary act and deed for the uses and
Notary Public			

Assignor's signature	Mary	Ellen	Polvino-Bodnar
	First Name	Middle initial	Last name
Citizenship: Unite	ed States of America		
IN WITNESS WHE	CREOF, I have hereunto s	et my hand and affixed my seal	this day of November, 1999.
STATE OF	)		
COUNTY OF	ss.: )		
On this day o		e me, the undersigned authority	, personally appeared to me
	MARY ELLEN PO		
known and known t	o me to be the individual	who is described in and who ex	secuted the foregoing Assignment, and
		ted the same as his own volunta	ry act and deed for the uses and
purposed therein sp	ecified.		
Notary Public			
·			
Assignor's signatur	<b>2</b> :		
	Shu-Mei		Liang
	First Name	Middle initial	Last name
Citizenshin: Unite	ed States of America		
Chizenship. Chi	od States of Afficien		
IN WITNESS WHE	EREOF, I have hereunto s	set my hand and affixed my seal	this day of November, 1999.
STATE OF	)		
STATE OF	) ss.:		
COUNTY OF	)		
	,		
		re me, the undersigned authority	y, personally appeared
On this day o			·
	SHU-MEI LIANG	uidual suba ia damanta ad in d	
to me known and ki	SHU-MEI LIANG nown to me to be the indi	vidual who is described in and	who executed the foregoing Assignmen
to me known and kn	SHU-MEI LIANG nown to me to be the indi owledged to me that he ex	vidual who is described in and recuted the same as his own vol	who executed the foregoing Assignmen untary act and deed for the uses and
to me known and ki	SHU-MEI LIANG nown to me to be the indi owledged to me that he ex	vidual who is described in and secuted the same as his own vol	who executed the foregoing Assignmen
to me known and kn	SHU-MEI LIANG nown to me to be the indi owledged to me that he ex	vidual who is described in and recuted the same as his own vol	who executed the foregoing Assignmen

Tai Middle initial First Name Last name Citizenship: United States of America IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal this  $19^{10}$  day of November, 1999. STATE OF ) ss.: COUNTY OF ) On this day of November, 1999, before me, the undersigned authority, personally appeared JOSEPH Y. TAI to me known and known to me to be the individual who is described in and who executed the foregoing Assignment, and who duly acknowledged to me that he executed the same as his own voluntary act and deed for the uses and purposed therein specified.

FORM: ASSIGN. PAT

Rev. 07/29/99

Notary Public

Docket No. 1758-4036 US2