503813368 05/05/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3860016

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TAMAKI AKASHIKA	04/05/2016
KATSUYUKI DODO	04/05/2016
MASANARI KITAGAWA	04/05/2016

RECEIVING PARTY DATA

Name:	TAKARA BIO INC.
Street Address:	4-38, NOJIHIGASHI 7-CHOME
City:	KUSATSU-SHI, SHIGA
State/Country:	JAPAN
Postal Code:	525-0058

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15034592

CORRESPONDENCE DATA

Fax Number: (703)205-8050

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

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

Phone: (703)205-8000

Email: mailroom@bskb.com, tuyet.a.nguyen@bskb.com **Correspondent Name:** BIRCH, STEWART, KOLASCH & BIRCH, LLP

Address Line 1: P.O. BOX 747

Address Line 4: FALLS CHURCH, VIRGINIA 22040-0747

ATTORNEY DOCKET NUMBER:	1422-0813PUS1
NAME OF SUBMITTER:	TUYET ANH NGUYEN
SIGNATURE:	/TUYET ANH NGUYEN/
DATE SIGNED:	05/05/2016

Total Attachments: 5

source=2016-05-05_DecAssignment_1422-0813PUS1#page1.tif
source=2016-05-05_DecAssignment_1422-0813PUS1#page2.tif
source=2016-05-05_DecAssignment_1422-0813PUS1#page3.tif
source=2016-05-05_DecAssignment_1422-0813PUS1#page4.tif

PATENT 503813368 REEL: 038475 FRAME: 0771

 $source = 2016\text{-}05\text{-}05\text{_}DecAssignment_1422\text{-}0813PUS1\#page5.tif}$

PATENT REEL: 038475 FRAME: 0772

Doc code: Oath

Document Description: Oath or declaration filed

Attorney Docket No.: 1422-0813PUS1

PTO/AIA/02 (07-13) Approved for use through 01/31/2014. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

SUBSTITUTE STATEMENT IN LIEU OF AN OATH OR DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (35 U.S.C. 115(d) AND 37 CFR 1.64)

Title of Invention	METHOD FOR QUANTIFYING ADENO-A	SSOCIATED VIRUS		
This stateme	nt is directed to:			
The atta	ched application,			
OR				
√ United S	tates application or PCT international	application number PCT/JF	22014/081448 filed on	November 27, 2014
LEGAL NA	ME of inventor to whom this sub	stitute statement appli	ies:	
(E.g., Given	Name (first and middle (if any)) and Fa	amily Name or Surname)		
Tamaki AKAS	HIKA			
Residence (e	xcept for a deceased or legally incapa	citated inventor):		
City ^{Kusatsu-}	shi	State ^{Shiga}	Country ^{JP}	
Mailing Addres c/o TAKARA 8 4-38, Nojihiga		citated inventor):		
City Kusatsu-	shi	State ^{Shiga}	Zip 525-0058	Country ^{JP}
I believe the above-named inventor or joint inventor to be the original inventor or an original joint inventor of a claimed invention in the application.				
The above-identified application was made or authorized to be made by me.				
I hereby acknowledge that any willful false statement made in this statement is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.				
Relationship to the inventor to whom this substitute statement applies:				
Legal Representative (for deceased or legally incapacitated inventor only), Assignee,				
✓ Person to whom the inventor is under an obligation to assign,				
Person who otherwise shows a sufficient proprietary interest in the matter (petition under 37 CFR 1.46 is required), or				
Joint Inventor.				

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Attorney Docket No.: 1422-0813PUS1

PTO/SB/AIA02 (07-13)
Approved for use through 01/31/2014. OMB 0851-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

SUBSTITUTE STATEMENT

Circumstances permitting execution of this substitute statement:				
Inventor is deceased,				
Inventor is under legal incapacity,				
Inventor cannot be found or reached after	er diligent effort, or			
Inventor has refused to execute the oath	or declaration under 37 CF	R 1.63.		
If there are joint inventors, please check the appr	opriate box below:			
An application data sheet under 37 CFR or is currently submitted.	1.76 (PTO/AIA/14 or equiva	alent) naming the entire	e inventive entity has been	
OR				
An application data sheet under 37 CFR Statement Supplemental Sheet (PTO/Al information is attached. See 37 CFR 1.6	A/11 or equivalent) naming	alent) has not been sul the entire inventive en	bmitted. Thus, a Substitute tity and providing inventor	
	WARNING:			
Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.				
PERSON EXECUTING THIS SUBSTITUTE STATE	EMENT:			
April 5, 2016 Name: Koichi Nakao Date (Optional):				
Signature:				
APPLICANT NAME AND TITLE OF PERSON EXI				
If the applicant is a juristic entity, list the applicant r	name and the title of the sign	ier:		
Applicant Name: TAKARA BIO INC.			•	
Title of Person Executing This Substitute Statement: President & CEO				
The signer, whose title is supplied above, is authorized to act on behalf of the applicant.				
Residence of the signer (unless provided in an	application data sheet, PT	O/AIA/14 or equivale	nt):	
City Kusatsu-shi	State Shiga	Country Japan		
Mailing Address of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent)				
4-38, Nojihigashi 7-chome, Kusatsu-shi, Shiga 525-0058 Japan				
City Kusatsu-shi	ate Shiga	Zip 525-0058	Country ^{Japan}	
Note: Use an additional PTO/AIA/02 form for each		1		
after diligent effort, or has refused to execute the o				

[Page 2 of 2]

Attorney Docket No.: 1422-0813PUS1

BIRCH, STEWART, KOLASCH & BIRCH, LLP

P.O. Box 747 • Falls Church, Virginia 22040-0747

Telephone: (703) 205-8000 • Facsimile: (703) 205-8050 • Email: mailroom@bskb.com

DECLARATION AND ASSIGNMENT FOR PATENT AND DESIGN APPLICATIONS

UNITED STATES PATENT RIGHTS, OR UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

Title of Invention	⇔	METHOD FOR QUANTIFYING ADENO-ASSOCIATED VIRUS
		As a below named inventor (hereinafter designated as the undersigned), I hereby declare that:
Application not Attached	⇔	This declaration is directed to the application attached hereto. If the application is not attached hereto, the application is as identified by the attorney docket number as set forth above and/or the following:
Enter Appln. No.	⇔	United States Application Number or PCT International Appln. No. PCT/JP2014/081448
Enter Filing Date	⇔	filed on November 27, 2014
		The above-identified application was made or authorized to be made by me.
		I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
		I have reviewed and understand the contents of the above-identified application, including the claims.
		I acknowledge the duty to disclose information which is material to patentability as defined in Title 37 , Code of Federal Regulations \S 1.56 .
		WHEREAS, the undersigned has invented certain new and useful improvements described in the application identified.
Insert Name of Assignee	⇔	WHEREAS, Takara Bio Inc.
insert Address of Assignee	⇔	of 4-38, Nojihigashi 7-chome, Kusatsu-shi, Shiga 525-0058 Japan
		its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America and
Check Box if Appropriate	⇔	in any foreign countries.
		NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has sold, assigned and transferred, and by these presents does (do) sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America, its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America, its territories, dependencies and possessions, and if the box above is designated, in any and all foreign countries; and to any and all divisions, reissues, continuations, conversions and extensions thereof for the full term or terms for which the same may be granted.

Attorney Docket No.: 1422-0813PUS1

Attorney Docket No.

The undersigned agrees to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letters Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agrees to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agrees to perform all affirmative acts which may be necessary to obtain a grant of (a) valid United States of America patent(s) or a grant of (a) valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorizes and requests the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patent(s) resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has the full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grants the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office

The undersigned hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

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

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

Inventor's Name Inventor: Tamaki AKASHIKA Date: Inventor's Signature Signature: An application data short (PTO/SR/14 or agains least) including parting the entire inventive entity, must accompany this form

An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use a separate form for each inventor; or check the box below and complete the attached page(s) to list additional inventors.

$\boxed{m{V}}$ Additional inventors are being named on the _	supplemental sheet(s) attached hereto
--	---------------------------------------

Attorney Docket No.: 1422-0813PUS1

Attorney Docket No.

SUPPLEMENTAL SHEET FOR DECLARATION AND ASSIGNMENT

ADDITIONAL INVENTOR(S) Supplemental Sheet Page $\underline{1}$ of $\underline{1}$

	LEGAL NAME OF JOINT INVENTOR, IF ANY		
Inventor's Name	Inventor: Katsuyuki DODO	Date:	April 8, 2016.
Inventor's Signature	Signature: Katsuyulci Dodo		
	LEGAL NAME OF JOINT INVENTOR, IF ANY		1.1 - 0.16
Inventor's Name	Inventor: Masanari KITAGAWA	Date:	MM 5 2010
Inventor's Signature	Signature: Masanan Kitagawa		
	LEGAL NAME OF JOINT INVENTOR, IF ANY		
Inventor's Name	⇔Inventor:	Date:	
Inventor's Signature	⇒Signature:		
	LEGAL NAME OF JOINT INVENTOR, IF ANY		
Inventor's Name	⇒Inventor:	Date:	
Inventor's Signature	⇒Signature:		
	LEGAL NAME OF JOINT INVENTOR, IF ANY		
Inventor's Name	⇒Inventor:	Date:	
Inventor's Signature	⇒Signature:		
	LEGAL NAME OF JOINT INVENTOR, IF ANY		
Inventor's Name	⇔Inventor:	Date:	
Inventor's Signature	⇔Signature:		
	LEGAL NAME OF JOINT INVENTOR, IF ANY		
Inventor's Name	⇒Inventor:	Date:	
Inventor's Signature	⇒Signature:		
	LEGAL NAME OF JOINT INVENTOR, IF ANY		
Inventor's Name	⇒Inventor:	Date:	
Inventor's Signature	⇔Signature:		

BSKB-DECASSIGN\(09-12)

PATENT REEL: 038475 FRAME: 0777

RECORDED: 05/05/2016