A D P	irecto and O. B	top: ment Recordation Services RECORDATION FOI or of the U.S. Patent PATENT I Trademark Office tox 1450 ndria, VA 22313-1450	RM COVER SHEET U.S. DEPARTMENT OF COMMERCE S ONLY Patent and Trademark Office Attorney Docket No. 153903
		record the attached document. umber of pages including cover sheet, attachments, and documents.	ment: 3

1.	A.	Name of conveying parties:	2. A. Name and address of receiving party:
		[1] Satoshi KATAHIRA[2] Kenro TOKUHIRO[3] Nobuhiko MURAMOTO[4] Yoshina TAKAHASHI	KABUSHIKI KAISHA TOYOTA CHUO KENKYUSHO 41-1, YOKOMICHI, NAGAKUTE, AICHI 480-1192, JAPAN
	В.	Additional name(s) of conveying party(ies) attached?	B. Additional name(s) & address(es) attached? ☐Yes ☒ No
3.	A.	Nature of conveyance:	
	\boxtimes	Assignment	
		Security Agreement	
		Other	
	В.	Execution Date: [1-3] August 3, 2012; [4] August 31, 2012	
4.	A.	Patent Application No. 13/518,251	B. Patent No.(s)
		Additional numbers attac	hed? ☐ Yes ❷ No
	C.	Title of Application: XYLOSE ISOMERASE AND	USE THEREOF
5.	Nam	ne and address of party to whom correspondence perning document should be mailed:	6. Total number of applications and patents involved: 1
		me: <u>James A. Oliff</u> dress: OLIFF & BERRIDGE, PLC P.O. Box 320850	7. Please charge Deposit Account No. 15-0461 the total fee (37 CFR 3.41) in the amount of \$40.00.
		Alexandria, VA 22320-4850 Phone Number: 703-836-6400 Fax Number: 703-836-2787	Credit any overpayment or charge any underpayment to deposit account number 15-0461.
9.	To the		is true and correct and any attached copy is a true copy of the Date: November 5, 2012
	Jame Alan	s A. Oliff, Registration No. 27,075 Y. Liu, Registration No. 69,116	

PATENT REEL: 029276 FRAME: 0281

ASSIGNMENT

		(I)	Satoshi KATAHIRA	(5)	٠.	
(1-8)		(2)	Kenro TOKUHIRO			
	Name(s) of Inventor(s)	(3)	Nobuhiko MURAMOTO			
		(4)			<u>/**</u>	
		paid to set ove	In consideration of the each of the undersigned, each	sum of one dollar (\$	1 00) and other good and	volvable consideratio
(9)	Insert Name of Assignee	(9)	KABUSHIKI KAISHA	TOYOTA CHU	O KENKYUSHO	
(10)	Insert Address of Assignee	(10)	41-1, Yokomichi, Nagal	kute, Aichi 480-1]	192, Japan	
		inventi continu	after designated as the Assigner re right, title and interest for the m, and in all applications for p ation, international, confirmations, reissues and reexamination	se United States of Ar patent including my a ion, substitute and rei	merica as defined in 35 U.1 nd all provisional, non-prossure application(s) and all	S.C. §100, in the prisional, divisional,
(11)	Insert	(11)	XYLOSE ISOMERASE	AND USE THERE	OF .	
	Identification such as Title, Case Number, or Foreign Application Number	(Attorn	cy Docket No. 153903			
		for whi	th the undersigned has (have)	executed an applica	tion for patent in the Unit	ed States of America
(12)	Insert Date of Signing of	(12) on		3, 2012		
	Application					
(13)	Alternative	(13) Numbe	U.S. application Serial	13/518,251		
	Identification for filed applications	filed				
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_	In witness whereof, execute	ed by the	andersigned on the date(s) of August, 3, 25/2	pposite the undersi	gned name(s).	
Date	Antoshi Ka	taki	August 3, 20/2 Inventor Signature 5, k, 20/2, 8, 3	Satoshi KATAHIR	Katahira	(SEAL)
Date	August ?.	201	***************************************	Kenzo Keno TOKUHIRO	Katohira Tokuhiro	(SEAL)
Date	August 3	2012	Inventor Signature	Nobuhiko MURAN	Musomolo	(SEAL)
lf neithe	This assignment should prefer, then it should be signed bet	erably be s fore at leas	igned before; (a) a Notary Pul t two witnesses who also sign	olic if within the U.S here:	.A. (b) a U.S. Consul if o	atside the U.S.A.
Date	•		-		ri Kumasal	; Ca
Date	August 3,	20/2	Witness	Naoko	ni Kumasat Nakano	

PATENT REEL: 029276 FRAME: 0282

ASSIGNMENT

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(9) Insert Name of Assignee (10) Insert Address of Assignee (10) Insert Address of Assignee (11) Insert Identification such as Title, Case Number, or Foreign Application Number (12) Insert Date of Signing of Application (13) Alternative Identification for filed applications (13) Alternative Identification for filed applications and patents as the Assigner in every way possible in 3) Each undersigned agree any application or continuation or dit the Assignee in every way possible in 3) Each undersigned agree claims or provisions of the Internation 4) Each undersigned agree recreamination a grant of a valid Unit 5) Each undersigned author Patents of the United States resulting full right to convey the entire interest and agrees that this assignment is bir	(4) paid to set ov (9) (10) (herein the entinvent continuextens (11) (Attor for whom eve (12) on (13) Numb	In consideration of the sum of one dollar (\$1.00) and other good and valuable consideration to each of the undersigned, each undersigned agrees to assign, and hereby does assign, transfer and over to KABUSHIKI KAISHA TOYOTA CHUO KENKYUSHO 41-1, Yokomichi, Nagakute, Aichi 480-1192, Japan sinafter designated as the Assignee) and Assignee's heirs, successors, assigns and legal representatives, nitire right, title and interest for the United States of America as defined in 35 U.S.C. §100, in the mition, and in all applications for patent including any and all provisional, non-provisional, divisional, mutation, international, confirmation, substitute and reissue application(s), and all Letters Patent, asions, reissues and reexamination certificates that may be granted on the invention known as XYLOSE ISOMERASE AND USE THEREOF August 31, 2012 U.S. application Serial 13/518,251 ber
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Flugus (31, 20		Yoshina TAKAHASHI (Legal Representative for deceased inventor, Harwo TAKAHASHI)
This assignment should pref If neither, then it should be signed be	ferably be fore at le	be signed before: (a) a Notary Public if within the U.S.A. (b) a U.S. Consul if outside the U.S.A. least two witnesses who also sign here:
Date		Mayou
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PATENT REEL: 029276 FRAME: 0283