ASSIGNMENT RECORDATION FORM COVER SHEET Patents Only

To: Commissioner for Patents:	Date: July 25, 2005
Please record the attached original documents or copy thereof.	Attorney Docket No. 5051.693
Name of conveying party(ies):	2. Name and address of receiving party(ies):
[1.] Todd R. Klaenhammer [2.] Eric Altermann [3.] Rodolphe Barrangou [4.] W. Michael Russell [5.] Tri Duong	North Carolina State University Campus Box 8210 Raleigh, North Carolina
Additional name(s) of conveying party(ies) attached? Yes _X_ No	
3. Nature of convoyance: X Assignment Merger Security Agreement Change of Name Other Execution Date: [1.] June 10, 2005 [2.] June 10, 2005 [3.] June 8, 2005 [4.] June 14, 2005 [6.] June 10, 2005 4. Application Serial No. 11/074,226 If this document is being filed together with a new application, is: Additional numbers attached? Yes X No 5. Name and address of party to whom correspondence concerning document should be mailed: Mary L. Miller Myers Bigel Sibley & Sajovec P. O. Box 37428 Raleigh NC 27627	6. Total number of applications and patents involved: 7. Total fee (37 CFR 3.41) Enclosed 540.00
	X Authorized to be charged to deposit account 8. Deposit account number: 50-0220
DO NOT USE THIS SPACE	
9. Statement and signature To the best of my knowledge and belief, the foregoing informat of the original document. Mary L. Miller, Reg. No. 39,303 Date Total number of pages including cover sheet, attachments and documents and documents of the pages including cover sheet, attachments and documents and documents and documents of the pages including cover sheet, attachments and documents and documents and documents and documents are documents. CERTIFICATION OF FACUNDER 37 I hereby certify that this correspondence is being facsimi. Trademark Office via facsimile number 571-273-0140 on July 2: Cathy A. Scott	current: 23 CSIMILE TRANSMISSION CFR § 1.8 le transmitted to the U.S. Patent and

PATENT

NO. 8028 P. 3

APPLICATION SERIAL NO. 11/074,266
ATTORNEY DOCKET NO. 5051.693

ASSIGNMEN'T

THIS ASSIGNMENT, made by us, Todd R. Klaenhammer, a citizen of the United States of America; Eric Altermann, a citizen of Germany; Rodolphe Barrangou, a citizen of France; W. Michael Russell, a citizen of the United States of America; and Tri Duong, a citizen of the United States of America.

WITNESSETH: That,

WHEREAS, we are the joint inventors of certain new and useful improvements in Lactobacillus Acidophilus Nucleic Acid Sequences Encoding Carbohydrate Utilization-Related Proteins and Uses Therefor, for which U.S. Provisional Application Serial No. 60/551,121 was filed on March 8, 2004, International Application No. PCT/US05/007594 was filed on March 8, 2005, and U.S. Application Serial No. 11/074,226 was filed on March 7, 2005, in the United States Patent and Trademark Office; and

WHEREAS, North Carolina State University, a constituent institution of The University of North Carolina and an educational institution chartered under the laws of the State of North Carolina, having a principal office at Campus Box 8210, City of Raleigh, County of Wake, State of North Carolina, hereinafter referred to as assignee, is desirous of acquiring the entire right, title and interest in and to said invention as described in said application, and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

NOW, THEREFORE, To Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we have sold and by these presents do hereby sell, assign, transfer, and convey unto the said assignee, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any and all continuations, continuations in-part, or divisions thereof, and in and to any and all Letters Patent of the United States of America and all foreign countries or reissues or other forms of protection thereof which may be granted therefor or thereon, for the full end of the term for which said Letters Patent may be granted along with any term extensions thereon or therefor, together with the right to claim the priority of said application in all foreign countries in accordance with the International Convention, the same to be held and enjoyed by said assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

Page 1 of 7

PATENT

We hereby request that said Letters Patent be issued in accordance with this assignment.

We further covenant and agree that, at the time of the execution and delivery of these presents, we possess full title to the invention and application above-mentioned, and that we have the unencumbered right and authority to make this assignment.

We further covenant and agree to communicate to said assignee or its representatives any facts known to us relating to said invention, to testify in any interference or legal proceedings involving said invention, to execute any additional papers which may be requested to confirm the right of the assignee, its representatives, successors, or assigns to secure patent or similar protection for the said invention in all countries and to vest in the assignce complete title to the said invention and Letters Patent, without further compensation, but at the expense of said assignee, its successors, assigns, and other legal representatives; and we hereby instruct, and further covenant and agree to bind my heirs, legal representatives, and assigns, to do same, without further compensation, but at the expense of said assignee or its representatives.

IN WITNESS WHEREOF, I hav	c hereunto set my hand and seal on this da
of, 2005.	
Todd R. Klaenhammer (SEAI	-)
STATE OF	
Before me personally appeared th	e person described in and who executed the
foregoing instrument, and s/he acknowled	lged to me that s/he executed the same for the
purposes therein stated, this day of	of, 20
SEAL	Notary Public
My Commission Expires:	

Page 3 of 7

PATENT

	e hereunto set my hand and seal on this day
of, 2005.	
(SEAL	.)
Eric Altermann	
STATE OF	
STATE OF) ss: COUNTY OF)	
COUNTY OF)	
Before me personally appeared the	e person described in and who executed the
	iged to me that s/he executed the same for the
purposes therein stated, this day o	of, 20
_	
SEAL	Notary Public
My Commission Fynires:	

Page 4 of 7

PATENT REEL: 016564 FRAME: 0833

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this day
of, 2005.
Rodolphe Barrangou
STATE OF)
STATE OF)
Before me personally appeared the person described in and who executed the
foregoing instrument, and s/he acknowledged to me that s/he executed the same for the
ourposes therein stated, this day of, 20
SEAL Notary Public
My Commission Expires:

Page 5 of 7

PATENT ...

Page 6 of 7

... PATENT

IN WITNESS WHEREOF, I have hereouto set my hand and seal on this da
of, 2005.
Tri Duong (SEAL)
STATE OF)
STATE OF) OUNTY OF) SS: OUNTY OF
Before me personally appeared the person described in and who executed the
foregoing instrument, and s/he acknowledged to me that s/he executed the same for the
purposes therein stated, this day of, 20
SEAL Notary Public
My Commission Expires

PATENT REEL: 016564 FRAME: 0836

−NO.8028−−−₽. 10−

APPLICATION SERIAL NO. 11/074,266
ATTORNEY DOCKET NO. 5051.693

ASSIGNMENT

THIS ASSIGNMENT, made by us, Todd R. Klaenhammer, a citizen of the United States of America; Eric Altermann, a citizen of Germany; Rodolphe Barrangou, a citizen of France; W. Michael Russell, a citizen of the United States of America; and Tri Duong, a citizen of the United States of America.

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IN WITNESS WHEREOF, I have hereunto set my hand and seal on this _______ day of ________, 2005.

Eric Altermann

STATE OF <u>NC</u>) ss COUNTY OF <u>Wake</u>

- Suffrey M.

SEAL

My Commission Expires: March 12, 2008

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this day of, 2005.
Rodolphe Barrangou
STATE OF
COUNTY OF) ss:
Before me personally appeared the person described in and who executed the
oregoing instrument, and s/he acknowledged to me that s/he executed the same for the
urposes therein stated, this day of, 20
EAL Notary Public
Iv Commission Expires:

of, 20	HEREOF, I have hereunto set my hand and seal on this day 005.
W. Michael Russell	(SEAL)
STATE OF	<u></u>
COUNTY OF) ss:)
Before me person	ally appeared the person described in and who executed the
	d s/he acknowledged to me that s/he executed the same for the
	his, day of, 20
SEAL	Notary Public
My Commission Expires:	

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 10 day of 100.

Tri Duone (SEAL)

SEAL

My Commission Expires: March 12, 2008

ASSIGNMENT

THIS ASSIGNMENT, made by us, Todd R. Klaenhammer, a citizen of the United States of America; Eric Altermann, a citizen of Germany; Rodolphe Barrangou, a citizen of France; W. Michael Russell, a citizen of the United States of America; and Tri Duong, a citizen of the United States of America.

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IN WITNESS WHEREOF, I	have hereunto set my hand and seal on this day
Todd R. Klaenhammer (SE	(AL)
STATE OF	
COUNTY OF) ss:	
Before me personally appeared	I the person described in and who executed the
foregoing instrument, and s/he acknow	ledged to me that s/he executed the same for the
purposes therein stated, this da	y of, 20
SEAL	Notary Public
My Commission Expires:	

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this da
of, 2005.
(SEAL)
Eric Altermann
STATE OF
STATE OF) ss: COUNTY OF
Before me personally appeared the person described in and who executed the
oregoing instrument, and s/he acknowledged to me that s/he executed the same for the
purposes therein stated, this day of, 20
Notary Public
SEAL
My Commission Expires:

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 8tM day of 3005.

odolphe Barrangou

Before me personally appeared the person described in and who executed the foregoing instrument, and s/ne acknowledged to me that s/he executed the same for the purposes therein stated, this _____ day of ______ . 20 \to 5.

(SEAL)

SEAL

My Commission Expires; __ ৬-7-২০০৭

ORY BROCK

of, 2005.	ve hereunto set my hand and seal on this da
W. Michael Russell	L)
STATE OF	
COUNTY OF	
Before me personally appeared t	he person described in and who executed the
foregoing instrument, and s/he acknowle	edged to me that s/he executed the same for the
purposes therein stated, this day	of, 20
SEAL	Notary Public
My Commission Expires:	

IN WITNESS WHEREOF, I have hereunto set my har	nd and seal on this day
of, 2005.	
Tri Duong (SEAL)	
STATE OF	
COUNTY OF	
Before me personally appeared the person described in	and who executed the
foregoing instrument, and s/he acknowledged to me that s/he ex	xecuted the same for the
purposes therein stated, this day of	_, 20
SEAL Notary Pub	blic
My Commission Expires:	

RECORDED: 07/25/2005