FORM PTO 1505 (Murelland) 02 - 08 -	-2005 Docket No.: MSU 4.1-652
FORM PTO-1595 (Modified) (Rev. 03-01) OMB No. 0651-0027 (exp.5/31/2002) POB/REV03	I U.S. DEPARTMENT OF COMMERC
<i>Tab settings</i> → → ▼ 10293	
	ce: Please record the attached original documents or copy thereof.
Name of conveying party(ies): J. Gregory Zeikus Maris Laivenieks Claire Vieille Pil Kim	Name and address of receiving party(ies): Name: Board of Trustees of Michigan State University
-	Internal Address:
Additional names(s) of conveying party(ies) ☐ Yes ☒ No	- d S - C - C - C - C - C - C - C - C - C -
3. Nature of conveyance:	74
	Street Address: Michigan State University
☐ Security Agreement ☐ Change of Name	238 Administration Building
☐ Other Zeikus and Vieille 8/05/04	City: East Lansing State: MI ZIP: 48824
Execution Date: Pil Kim 8/11/04 Laivenieks 8/25/04	Additional name(s) & address(es) attached? Yes No
Additional numbers atta	ched? □ Yes ⊠ No
	Micuri Ci ies & No
Name and address of party to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: 1
Name: Ian C. McLeod	7. Total fee (37 CFR 3.41):\$ 40.00
Internal Address: McLeod & Moyne, R.C. 07/2005 6T0H11 00000113 130610 11042977	Enclosed - Any excess or insufficiency should be credited or debited to deposit account
FC:8021 40.00 DA	☐ Authorized to be charged to deposit account
Street Address: 2190 Commons Parkway	8. Deposit account number:
	13-0610
City: Okemos State: MI ZIP: 48864	(Attach duplicate copy of this page if paying by deposit account)
9. Statement and signature.	USE THIS SPACE
	nation is true and correct and any attached copy is a true copy
Ian C. McLeod	Cr / 2 08/30/04
Name of Person Signing	Signature Date
Total number of pages including cover si	heet, attachments, and document:

Mail documents to be recorded with required cover sheet information to:
Mail Stop Assignment Recordation Services
Director of the United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450

ASSIGNMENT

WHEREAS. we, J. GREGORY ZEIKUS, MARIS LAIVENIEKS, CLAIRE VIEILLE AND PIL KIM, residing at 2529 Dustin, Okemos, Michigan 48864; 705 Cherry Lane, Apt. 202, East Lansing, Michigan 48823; 2715 Fernwood Avenue, Lansing, Michigan 48912; and 521-39 Mangu-3 Dong, Chungrang-Ku, Seoul, South Korea, respectively have invented certain new and useful improvements ACTINOBACILLUS SUCCINOGENES SHUTTLE VECTOR AND METHODS OF USE for which an application for United States Letters Patent was filed on August 5, 2004 and assigned Serial No. 10/911,961; and

WHEREAS, Board of Trustees, a constitutional Corporation of MICHIGAN STATE UNIVERSITY, (hereinafter referred to as Assignee) of East Lansing, State of Michigan is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to us in hand paid, the receipt whereof is hereby acknowledged, and other valuable considerations, we the said J. GREGORY ZEIKUS, MARIS LAIVENIEKS, CLAIRE VIEILLE AND PIL KIM, have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations and extensions thereof.

We hereby authorize and request the Patent and Trademark Office officials in the United States and any and all foreign countries to issue any and all of said Letters Patent, when granted, to said Assignee as the Assignee of our entire right, title and interest in and to the same for the sole use and behoof of the said Assignee, its successors and assigns.

FURTHER, we agree that we will communicate to said Assignee or its representatives any facts known to us respecting said invention, and testify in any legal proceeding, siqn all lawful papers, execute divisional, continuation, substitution, renewal reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said Assignee, make all rightful oaths and generally do everything possible to aid said Assignee, its successors and assigns, to obtain and enforce proper protection for said invention in the United States and in any and all foreign countries.

Jancopl

J. Gregor Zeikus

STATE OF MICHIGAN :

ss.

COUNTY OF INGHAM

On this 5th day of ugust, 2004, personally appeared before me the above named J. Gregory Zeikus to me known and known to me to be the person described in and who executed the foregoing instrument and acknowledged the same to be his free act and deed in and for the purposes set forth in said instrument.

SEAL

Notary Pula MAPL TAYLOR

My Commission Expires: Notary Public, Ingham County, MI
My Commission Expires Oct. 27, 2008

IN TESTIMONY WHEREOF, I have hereunto set my
hand this 35 day of August. , 2004
Signed in the Presence of:
Carole Jest M. Laiveniers Maris Laiveniers
Maris Laivenieks
STATE OF MICHIGAN :
COUNTY OF INGHAM :
On this 25 day of August. 2004, personally appeared before me the above named Maris Laivenieks to me known and known to me to be the person described in and who executed the foregoing instrument and acknowledged the same to be his free act and deed in and for the purposes set forth in said instrument.
SEAL Mary Dunn
Notition ary Public, Clinton County, Michigan My Commission Expires Active in Leghan County, Michigan My Comm. Expires July 8, 2005 Signature
IN TESTIMONY WHEREOF, I have hereunto set my
hand this 5 day of August, 2004
Signed in the Presence of:
Finde avieille
Claire Vieille
STATE OF MICHIGAN :
COUNTY OF INGHAM :
On this 5th day of duguet, 2004, personally appeared before me the above named Claire Vieille to me known and known to me to be the person described in and who executed the foregoing instrument and acknowledged the same to be her free act and deed in and for the purposes set forth in said instrument.
SEAL James L. Saylor Notary Public
Notary Public TAMMIL. TAYLOR My Commission Expires: Notary Public, Ingham County, MI My Commission Expires Oct. 27, 2008

	IN TESTIMONY WHEREOF, I have hereunto set my
hand this	11th day of August, 2004
Signed in	the Presence of:
Wh So-your	Me. 11 204.8.11
So-Your	19, cho PII Kim
STATE OF	: ss.
COUNTY OF	:
On this 11th day of August, 2004, personally appeared before me the above named Pil Kim to me known and known to me to be the person described in and who executed the foregoing instrument and acknowledged the same to be his free act and deed in and for the purposes set forth in said instrument.	
SEA	of Biotechnology Notary Public
	My Commission Expires: 166.28.205

RECORDED: 01/25/2005