FORM PTO	O-1619a	•	UOMI	321699
OMB 0651-0027		04-29-1999	)	
8				U.S. Department of Comr Patent and Trademark Of
<b>→</b>				PATENT
i	_	101022435		
Ť	RE	ECORDATION FORM CC	OVER SHEET	
TO: The Com	missioner of Patents and 1	PATENTS ON Trademarks: Please record the Conveyance Ty	ILY	
Submission	1 Туре	Conveyance Ty	attached original doc	ument(s) or copy(ies)
		Assignment	•	
Resubmi Documen	ssion (Non-Recordation)		Security Agr	eement
bocumer		License	Change of Na	ime
Reel #	on of PTO Error Frame #	Merger		
Corrective	e Document		Con Con	firmatory Licen
Reel #	Frame #	(For U	se ONLY by U.S. Governmen	t Agencies)
Conveying P	'arty(ies)		partmental File	Secret File
Name (line 1)		Mark if additional	names of conveying parti	ies attached Execution Date
Name (line 2)	OF MA	RYLAND BALTIMORE		Month Day Year
Second Party				2/16/99
Name (line 1)				Execution Date
Name (line 2)				Month Day Year
Receiving Par	rty			]
Name (line 1) N	ational Institut	Mai	rk if additional names of re	eceiving parties attached
		the second realth, The		If document to be record
Name (line 2)	xtramural Invent	ions Office, The		IS an assignment and th receiving party is not
				domiciled in the United States, an appointment
Address (line or [	701 Rockledge Dr	ive, Room 3188		of a domestic representative is attached
Address (line 2) MS	SC 7750			(Designation must be a separate document from
Address (line 3) B	ethesda			Assignment.)
Domestic Repr	<u> </u>		SA 20892-	7750
	city resentative Name and	d Address	Zip Cod	<u>e</u>
Name			he first Receiving Party or	nly.
Address (line 1)				
Address (line 2)				
Address (line 3)				
Address (line 4)				
(ine 4)				
		FOR OFFICE USE ONLY		
Public burden reporting for this	3 collection of information	o average approximately 30 minutes per Cover ts regarding this burden estimate to the U.S. Pe e of Management and Budget, Paperwork Redu rk Assignment Practice. DO NOT SEND REQU		

Commissioner of Patents and Trademarks Box Assignments WREEL: 9907 FRAME: 0031

		UOMB21699
FORM PTO-1619B Expires 06/30/99 OMB 0651-0027	Page 2	U.S. Department of Commerce Patent and Trademark Office PATENT
Correspondent Name and Addres	SS Area Code and Telephone Num	ber 301-435-1986
Name National Institu	tes of Health, The	]
Address (line 1) Extramural Inven	tions Office, The	
Address (line 2) 6701 Rockledge D	rive, Room 3188	]
Address (line 3) MSC 7750		
Address (line 4) Bethesda, Maryl	and / USA 20892-7750	
Pages Enter the total number of including any attachme	of pages of the attached conveyance d ents.	ocument # 4
Application Number(s) or Patent I	Number(s)	ark if additional numbers attached
	the Patent Number (DO NOT ENTER BOTH num	
Patent Application Number(s		atent Number(s)
09058760 08802371	09045624	[]
08433790		
If this document is being filed together with a new	Patent Application, enter the date the patent app	olication was Month Day Year
signed by the first named executing inventor.		
Patent Cooperation Treaty (PCT)		
Enter PCT application numbe		PCT
only if a U.S. Application Nun has not been assigned.	mber PCT PCT	РСТ
Number of Properties		[]
Enter th	e total number of properties involved.	# 4
Eas Amount	unt for Properties Listed (37 CFR 3.44	I): \$
Fee Amount Fee Amount Fee Amount E	unt for Properties Listed (37 CFR 3.4 Enclosed Deposit Account	]
Fee Amount Fee Amount Method of Payment: E Deposit Account		I): \$] #
Fee Amount Fee Amount Fee Amount E Method of Payment: E Deposit Account	f additional fees can be charged to the account.)	#
Fee Amount Fee Amou Method of Payment: E Deposit Account (Enter for payment by deposit account or it	f additional fees can be charged to the account.) Deposit Account Number:	#
Fee Amount       Fee Amount         Method of Payment:       E         Deposit Account       E         (Enter for payment by deposit account or it         Statement and Signature         To the best of my knowledge and	f additional fees can be charged to the account.) Deposit Account Number:	#
Fee Amount       Fee Amount         Method of Payment:       E         Deposit Account       E         (Enter for payment by deposit account or it         Statement and Signature         To the best of my knowledge and attached copy is a true copy of the statement of the state	f additional fees can be charged to the account.) Deposit Account Number: Authorization to charge additional fees d belief, the foregoing information is th	#

## License to the United States Government

Invention Title: METHOD FOR INTRODUCING AND EXPRESSING GENES IN ANIMAL CELLS, AND LIVE INVASIVE BACTERIAL VECTORS FOR USE IN THE SAME

NIH Invention Disclosure No: 0820104-95-0006

Inventor(s): Robert J. Powell, George K. Lewis, David M. Hone

UMB Tech ID: 1339DH

Patent or Application Serial No.: 08/433,790

U.S. Filing/Issue Date: May 3, 1995

Grant/Contract Identification Number(s): NIH 5-RO1-AI32879

Foreign Applications filed in (countries): European Union, Japan, Canada, Australia

The invention identified above is a Subject Invention under 35 U.S.C. 200, et seq., and the Standard Patent Rights clause at 37 CFR 401.14 or FAR 52.227-11, which are included among the terms of the above-identified grant/contract award from the Public Health Service/National Institutes of Health. This document is confirmatory of:

- 1. The nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the invention described in any patent application and in any and all divisions, continuations, and continuations in part, and in any and all patents and re-issues granted thereon throughout the world; and
  - 2. All other rights acquired by the Government by reason of the above identified grant/contract award and the laws and regulations which are applicable to the award.

The Government is hereby granted an irrevocable power to inspect and make copies of the aboveidentified patent application.

Signe	ed this lb_ day of	tebi	<u>uary</u> , 19	<u>99</u> .
By		Harpone	Jonst	
	Marjorie F	orster, Execu	tive Director	
For t	the Office of Research and Developn	nent. Univers	ity of Maryland.	Baltimore

At 515 West Lombard Street. Suite 500, Baltimore, Maryland, 21201-1602

## License to the United States Government

Invention Title: ASSAY FOR MEASURING THE ACTIVITY AND FIDELITY OF DNA REPLICATION AND KIT THEREFOR.
Inventor(s): Jennifer W. Sekowski, Linda H. Malkas and Robert J. Hickey
NIH Invention Disclosure No: 0820104-96-0007
UMB Tech ID: 1426RH
Application Serial No.: 09/045,624
U.S. Filing Date: 3/20/1998
Grant/Contract Identification Number(s): NIH CA 57350; NIH CA 65754; and DAMD 17-94-J-1451

Foreign Applications filed/intended in (countries): None (US rights only)

The invention identified above is a Subject Invention under 35 U.S.C. 200, et seq., and the Standard Patent Rights clause at 37 CFR 401.14 or FAR 52.227-11, which are included among the terms of the above-identified grant/contract award from the Public Health Service/National Institutes of Health. This document is confirmatory of:

- 1. The nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the invention described in any patent application and in any and all divisions, continuations, and continuations in part, and in any and all patents and re-issues granted thereon throughout the world; and
- 2. All other rights acquired by the Government by reason of the above identified grant/contract award and the laws and regulations which are applicable to the award.

The Government is hereby granted an irrevocable power to inspect and make copies of the aboveidentified patent application.

Signed this	16th day	of	February	, 19 <u></u> 9 <u>7</u> .
Bv		Marjone	Forot	
]	Marjorie Forster,	Executive D	irector	
For the Office	of Research and	Developmen	t. University of N	Maryland, Baltimore
At _515 West I	Lombard Street.	<u>Suite 500. Ba</u>	ltimore, Marylan	d. 21201-1602

## License to the United States Government

Invention Title: NOVEL, NON-PYROGENIC BACTERIAL STRAINS AND USE OF THE SAME

NIH Invention Disclosure No: 0820104-95-0007

Inventor(s): Robert J. Powell and David M. Hone

UMB Tech ID: 1352DH

Patent or Application Serial No.: 08/802,371

U.S. Filing/Issue Date: November 21, 1996

Grant/Contract Identification Number(s): NIH 5-RO1-AI32879

Foreign Applications filed in (countries): European Union

The invention identified above is a Subject Invention under 35 U.S.C. 200, et seq., and the Standard Patent Rights clause at 37 CFR 401.14 or FAR 52.227-11, which are included among the terms of the above-identified grant/contract award from the Public Health Service/National Institutes of Health. This document is confirmatory of:

- 1. The nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the invention described in any patent application and in any and all divisions, continuations, and continuations in part, and in any and all patents and re-issues granted thereon throughout the world; and
  - 2. All other rights acquired by the Government by reason of the above identified grant/contract award and the laws and regulations which are applicable to the award.

The Government is hereby granted an irrevocable power to inspect and make copies of the aboveidentified patent application.

Signed this	16	day of	te	bruary	, 19	<u>19</u> .
By		Afce	jone	Toroth		
÷	Marjorie Forster, Executive Director					

For the Office of Research and Development, University of Maryland, Baltimore

At 515 West Lombard Street, Suite 500, Baltimore, Maryland, 21201-1602

License to the United States Government Invention Title: ISOLATION AND PURIFICATION OF THE DNA SYNTHESOME Inventor(s): Jennifer Coll, Linda H. Malkas and Robert J. Hickey NIH Invention Disclosure No: 0820104-97-0008 UMB Tech ID: 1449JC Application Serial No.: 09/058,760 **U.S. Filing Date: 4/11/1998** Grant/Contract Identification Number(s): NIH CA 57350; NIH CA 65754; and

Foreign Applications filed/intended in (countries): None (US rights only)

The invention identified above is a Subject Invention under 35 U.S.C. 200, et seq., and the Standard Patent Rights clause at 37 CFR 401.14 or FAR 52.227-11, which are included among the terms of the above-identified grant/contract award from the Public Health Service/National Institutes of Health. This document is confirmatory of:

1. The nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the invention described in any patent application and in any and all divisions, continuations, and continuations in part, and in any and all patents and re-issues granted thereon throughout the world; and

DAMD 17-94-J-4157

2. All other rights acquired by the Government by reason of the above identified grant/contract award and the laws and regulations which are applicable to the award.

The Government is hereby granted an irrevocable power to inspect and make copies of the aboveidentified patent application.

Signed this \_\_\_\_\_\_ la day of \_\_\_\_\_\_ February \_\_\_\_\_\_, 19\_99. By \_\_\_\_\_\_\_ Marjorie Forster, Executive Director

For the Office of Research and Development, University of Maryland, Baltimore

At 515 West Lombard Street, Suite 500, Baltimore, Maryland, 21201-1602