PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Cymbeline T Culiat	03/04/2009

RECEIVING PARTY DATA

Name:	UT-Battelle, LLC
Street Address:	One Bethel Valley Road
Internal Address:	4500N, MS-6258
City:	Oak Ridge
State/Country:	TENNESSEE
Postal Code:	37831-6258

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12284667

CORRESPONDENCE DATA

Fax Number: (865)574-0381

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: (865) 574-0393

Email: bowmanke@ornl.gov

Correspondent Name: Edna I. Gergel

Address Line 1: One Bethel Valley Road

Address Line 2: 4500N, MS-6258

Address Line 4: Oak Ridge, TENNESSEE 37831-6258

ATTORNEY DOCKET NUMBER: 1787.2

NAME OF SUBMITTER: Karen E. Bowman

Total Attachments: 3

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PATENT REEL: 022446 FRAME: 0349 Form **PTO-1595** (Rev. 07/05) OMB No. 0651-0027 (exp. 6/30/2008)

RECORDATION FORM COVER SHEET PATENTS ONLY			
To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.			
Name of conveying party(ies) Cymbeline T. Culiat	2. Name and address of receiving party(ies) Name: UT-Battelle, LLC Internal Address: 4500N, MS-6258		
	Street Address: One Bethel Valley Road City: Oak Ridge State: TN Country: USA Zip: 37831-6258 Additional name(s) & address(es) attached? Yes No document is being filed together with a new application.		
A. Patent Application No.(s) 12/284,667 Additional numbers att	B. Patent No.(s) ached? ☐Yes ✔No		
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: 1		
Name: Edna I. Gergel Internal Address: UT-Battelle, LLC	7. Total fee (37 CFR 1.21(h) & 3.41) \$_40.00 Authorized to be charged by credit card Authorized to be charged to deposit account		
Street Address: One Bethel Valley Road 4500N, MS-6258	EnclosedNone required (government interest not affecting title)		
City: Oak Ridge State: TN Zip:37831-6258	8. Payment Information a. Credit Card Last 4 Numbers Expiration Date		
Phone Number: (865) 574-0393 Fax Number: (865) 574-0381 Email Address: gergelei@ornl.gov	b. Deposit Account Number 13-1958 Authorized User Name Joseph A. Marasco		
9. Signature: /Edna I. Gergel/ Signature Edna I. Gergel, Reg. No. 50819 Name of Person Signing	Total number of pages including cover sheet, attachments, and documents:		

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to: Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

PATENT

REEL: 022446 FRAME: 0350

ASSIGNMENT

WHEREAS, I the below-named inventor whose residence and post office are as stated below, have invented certain new and useful improvements in

Treatment of Cardiovascular Disorders Using the Cell Differentiation Signaling Protein NELL1

(hereinafter referred to as "Subject Invention") for which an application for United States Letters Patent was executed by me on even date herewith, and

WHEREAS, UT-BATTELLE, LLC, a limited liability company of the State of Tennessee, having an office at One Bethel Valley Road, P. O. Box 2008, Oak Ridge, Tennessee 37831-6258, hereinafter referred to as "ASSIGNEE," is desirous of acquiring the entire right, title and interest of the undersigned in the Subject Invention and to any Letters Patent that may be granted therefor in the United States of America and in any and all foreign countries.

NOW, THEREFORE, in accordance with the terms of my employment agreement with ASSIGNEE and for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby assign to ASSIGNEE my entire right, title and interest in the Subject Invention to all rights of priority thereto pursuant to the International Convention for the Protection of Industrial Property, and in any Letters Patent on the Subject Invention that may be granted in the United States of America and in any and all foreign countries, including any and all Letters Patent that are divisions, reissues, continuations, substitutions or extensions of any Letters Patent or applications therefor on the Subject Invention.

I hereby authorize and request the Commissioner of the United States Patent and Trademark Office and the officials of any and all foreign countries to issue any and all of said Letters Patent, when granted, to the ASSIGNEE.

Further, I hereby agree to communicate to said ASSIGNEE or its representatives any facts known to me respecting said Subject Invention, to testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitution, renewal and reissue applications, to execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, and to make all rightful oaths and generally do everything possible to aid said ASSIGNEE and its representatives to obtain and enforce proper protection for said Subject Invention in the United States of America and in any and all foreign countries.

I further agree that the terms, covenants and conditions of this assignment shall inure to the benefit of ASSIGNEE, its successors, assigns, and legal representatives, and shall be binding on mc, my heirs, legal representatives, and assigns.

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Docket No. 1787.2

Full name of inventor: Cymbeline T. Culiat

Signature: <u>lymbeline I. luliat</u> Date: <u>March 4 2009</u>

Residence: 1082 West Outer Drive, Oak Ridge, Tennessee 37830

Post Office Address: 1082 West Outer Drive, Oak Ridge, Tennessee 37830

State of Tennessee)
County of KOGNE)

On this 4th day of February, 2009, before me, a Notary Public in and for the County and State aforesaid, appeared CYMBELINE T. CULIAT to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.



Notary Public Scudder

SEAL

My Commission Expires:

RECORDED: 03/25/2009

My Commission Expires Thursday, August 14, 2012.

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