

**PATENT ASSIGNMENT**

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT								
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT								
<b>CONVEYING PARTY DATA</b>									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:70%;">Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Shari M. Ling</td> <td>06/05/2007</td> </tr> <tr> <td>Luigi Ferrucci</td> <td>06/05/2007</td> </tr> <tr> <td>Ming Zhan</td> <td>06/12/2007</td> </tr> </tbody> </table>		Name	Execution Date	Shari M. Ling	06/05/2007	Luigi Ferrucci	06/05/2007	Ming Zhan	06/12/2007
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Luigi Ferrucci	06/05/2007								
Ming Zhan	06/12/2007								
<b>RECEIVING PARTY DATA</b>									
<b>Name:</b>	The Government of the United States of America as represented by the Secretary of the Department of Health and Human Services								
<b>Street Address:</b>	6011 Executive Boulevard								
<b>Internal Address:</b>	National Institutes of Health, Office of Technology Transfer, Suite 325								
<b>City:</b>	Rockville								
<b>State/Country:</b>	MARYLAND								
<b>Postal Code:</b>	20852								
<b>PROPERTY NUMBERS Total: 3</b>									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>11573711</td> </tr> <tr> <td>PCT Number:</td> <td>US0528871</td> </tr> <tr> <td>Application Number:</td> <td>60602334</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	11573711	PCT Number:	US0528871	Application Number:	60602334
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Application Number:	11573711								
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<b>CORRESPONDENCE DATA</b>									
<b>Fax Number:</b>	(503)595-5301								
	<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>								
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<b>Correspondent Name:</b>	Sheree Lynn Rybak, Ph.D.								
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<b>Address Line 2:</b>	One World Trade Center, Suite 1600								
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<b>ATTORNEY DOCKET NUMBER:</b>	4239-70173-07								

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NAME OF SUBMITTER:

Sheree Lynn Rybak, Ph.D.

**Total Attachments: 4**

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## ASSIGNMENT

We, **Shari M. Ling**, of 10211 Feaga Farm Court, Ellicott City, Maryland 21042, a citizen of the United States of America, **Luigi Ferrucci**, of 619 University Parkway, Baltimore, MD 21210, a citizen of Italy, and **Ming Zhan**, of 14206 Schaeffer Road, Germantown, MD 20874, a citizen of Canada, along with **Lorah Perlee**, of 130 Blue Ridge Road, Wilton, Connecticut 06897, a citizen of the 130 Blue Ridge Road, Wilton, Connecticut 06897, **Velizar T. Tchernev**, of 45 Jefferson Road, #3-12, Branford, Connecticut 06405, a citizen of Bulgaria and the United States of America, **Serguei Lejnine**, of 3501 88th Ave SE #354, Mercer Island, WA 98040, a citizen of Russia, and **Dhavalkumar D. Patel**, of 203 Telluride Trail, Chaptel Hill, North Carolina 27514, a citizen of the United States of America, have invented a certain invention entitled BIOMARKERS FOR OSTEOARTHRITIS for which the following patent applications have been filed:

U.S. Provisional Patent Application No. 60/602,334, filed on August 18, 2004;  
PCT Application No. PCT/US2005/028871 filed on August 12, 2005; and  
U.S. Application No. 11/573,711 filed on February 14, 2007;

all of which applications are collectively referred to herein as "the patent applications."

We were employed by the Department of Health and Human Services at the time the invention was made. The conditions under which said invention was made are such as to entitle the Government of the United States of America under Paragraph 1(a) of Executive Order 10096, to our entire right, title, and interest in the invention, in the United States and all other countries throughout the world.

In consideration of our obligations under Executive Order 10096, and other valuable consideration, we the undersigned, have sold, assigned, and transferred and do sell, assign, and transfer to **The Government of the United States of America as represented by the Secretary of the Department of Health and Human Services** (hereinafter THE GOVERNMENT), and successors and assigns, our full and exclusive right, title, and interest in the patent applications and invention throughout the United States of America, its territories and dependencies, and all other countries. This includes an assignment of all Letters Patent that may be granted on the invention in the United States of America and all countries throughout the world, and any divisional, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof; and the right to claim priority from the patent applications as provided for by United States law, the Patent Cooperation Treaty, the European Patent Convention, the Paris Convention, or other applicable law.

We authorize and request the issuance of said Letters Patent to THE GOVERNMENT as assignee of our entire right, title, and interest to be held as fully and entirely as the same would have been held by us had this assignment not been made.

We warrant that there are no outstanding assignments, grants, liens, encumbrances, or agreements either written, oral, or implied that will impair, diminish, limit, or abridge the interest herein conveyed at the time of the execution of the present assignment.

We also agree upon reasonable request to communicate to THE GOVERNMENT, its representatives, assigns or agents, any facts known to us respecting the invention, and testify in any legal

proceedings, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths, provide all requested documents, and do everything reasonably possible to aid THE GOVERNMENT and its assigns to obtain and enforce proper patent protection for the invention in the United States or any foreign country. These provisions are binding upon our heirs, legal representatives, administrators and assigns.

We have authorized THE GOVERNMENT to file and prosecute the patent applications, as well as any corresponding international or national applications that claim priority from them. THE GOVERNMENT has the right to select attorneys or agents of its choice to prosecute at its discretion the patent applications on its behalf.

We grant the law firm of Klarquist Sparkman, LLP, the power to insert on this Assignment any further information that may be necessary or desirable in order to comply with all applicable legal requirements, including the rules of the United States Patent and Trademark Office, for submitting and recording this document.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: 6-5-2007

Shari M. Ling  
Shari M. Ling

STATE OF Maryland  
COUNTY OF Baltimore ) ss.

This 5<sup>th</sup> day of June, 2007, before me personally came the above-named Shari M. Ling, who executed the foregoing Assignment in my presence, and who acknowledged to me that it was executed under that person's own free will for the purposes set forth therein.

Belinda Gina White  
Notary Public for Baltimore, Md.  
My commission expires: 12/1/2010

[SEAL]

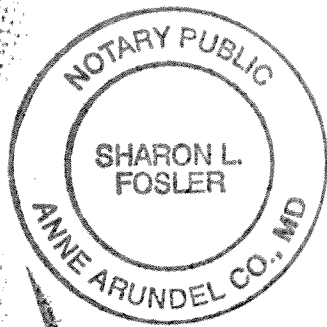
Dated: 5 June, 2007

*Luigi Ferrucci*  
Luigi Ferrucci

STATE OF Maryland  
COUNTY OF Anne Arundel Co.<sup>SS</sup>

This 5 day of June, 2007, before me personally came the above-named Luigi Ferrucci, who executed the foregoing Assignment in my presence, and who acknowledged to me that it was executed under that person's own free will for the purposes set forth therein.

[SEAL]



My Comm. Exps.  
1 Jan 2011

*Sharon L. Fosler*  
Notary Public for Maryland  
My commission expires:  
1 Jan 2011

