

## PATENT ASSIGNMENT

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| SUBMISSION TYPE:  | NEW ASSIGNMENT  |
| NATURE OF CONVEYANCE:   | ASSIGNMENT  |
| CONVEYING PARTY DATA  |   |
| Name  | Execution Date  |
| Qi Long Lu  | 02/14/2012  |
| RECEIVING PARTY DATA  |   |
| Name:   | The Charlotte-Mecklenburg Hospital Authority d/b/a Carolinas Medical Center |
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| State/Country:  | NORTH CAROLINA  |
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| PROPERTY NUMBERS Total: 1   |   |
| Property Type   | Number  |
| Application Number:   | 13369050  |
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| ATTORNEY DOCKET NUMBER:   | 038151/414405   |
| NAME OF SUBMITTER:  | Timothy J. Balts  |
| Total Attachments: 2<br>source=ASSIGN414405#page1.tif<br>source=ASSIGN414405#page2.tif                                |   |

CH \$40.00 13369050

## ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor has sold and assigned, and by these presents hereby sells and assigns, unto

**THE CHARLOTTE-MECKLENBURG HOSPITAL AUTHORITY  
d/b/a CAROLINAS MEDICAL CENTER**

P.O. Box 32861  
Charlotte, North Carolina 28232

its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries in and to the invention in **"ANTISENSE OLIGONUCLEOTIDES"**

as set forth in this United States Patent Application

- ☐ executed concurrently herewith
- ☐ executed on \_\_\_\_\_
- ☒ Application No. 13/369,050; filed 02/08/2012
- ☒ Application claims priority from Provisional Application No. 61/440,603, filed 02/08/2011, all applications listed above being hereinafter referred to as the "application(s)";

(We hereby authorize and request the Assignee and its attorney, (Alston & Bird LLP) to insert above the application number and filing date of said application when known.)

said application for United States Letters Patent, including all divisional, renewal, substitute, continuation, nonprovisionals, continuation-in-parts, and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues, reexaminations, and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent; said Assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignee or otherwise as said Assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, declarations, and lawful affidavits in form and substance which may be requested by said Assignee, to furnish said Assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs,

models, samples or other physical exhibits which may embody said inventions, and to testify in any proceedings relating to said inventions, patent applications, and/or Letters Patent.

The undersigned hereby grant(s) an authorized representative of Assignee the power to insert in this Assignment any further identification that may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

This Assignment is deemed to be effective at least as early as February 8, 2011.

2-14-2012  
Date

Qi Long LU  
Qi Long LU

**Witness:**

Cecilia Hurtado Vaca  
Signature

Cecilia Hurtado Vaca  
Name (Typed or Printed)

02/14/2012  
Date

Date

Attorney Docket No. 038151/414405