

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT | | | | | | | | | | | | | | | | |
|--|--|---------------|--|---------------------|-------------------------------|---------------|-----------------------|----------------|--------------------|-----------------|------------|---------------|------------|-----------|------------|----------------|------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT | | | | | | | | | | | | | | | | |
| CONVEYING PARTY DATA | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Hun-joo LEE</td> <td>08/28/2012</td> </tr> <tr> <td>Jeong-gun LEE</td> <td>08/28/2012</td> </tr> <tr> <td>Yeon-jeong KIM</td> <td>08/28/2012</td> </tr> <tr> <td>Jong-myeon PARK</td> <td>08/28/2012</td> </tr> <tr> <td>Mi-jeong SONG</td> <td>08/28/2012</td> </tr> <tr> <td>Jin-mi OH</td> <td>08/28/2012</td> </tr> <tr> <td>Jeong-woo CHOI</td> <td>08/28/2012</td> </tr> </tbody> </table> | | Name | Execution Date | Hun-joo LEE | 08/28/2012 | Jeong-gun LEE | 08/28/2012 | Yeon-jeong KIM | 08/28/2012 | Jong-myeon PARK | 08/28/2012 | Mi-jeong SONG | 08/28/2012 | Jin-mi OH | 08/28/2012 | Jeong-woo CHOI | 08/28/2012 |
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| RECEIVING PARTY DATA | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td>Name:</td> <td>Samsung Electronics Co., Ltd.</td> </tr> <tr> <td>Street Address:</td> <td>416 Maetan-dong, Yeongtong-gu</td> </tr> <tr> <td>City:</td> <td>Suwon-si, Gyeonggi-do</td> </tr> <tr> <td>State/Country:</td> <td>KOREA, REPUBLIC OF</td> </tr> </table> | | Name: | Samsung Electronics Co., Ltd. | Street Address: | 416 Maetan-dong, Yeongtong-gu | City: | Suwon-si, Gyeonggi-do | State/Country: | KOREA, REPUBLIC OF | | | | | | | | |
| Name: | Samsung Electronics Co., Ltd. | | | | | | | | | | | | | | | | |
| Street Address: | 416 Maetan-dong, Yeongtong-gu | | | | | | | | | | | | | | | | |
| City: | Suwon-si, Gyeonggi-do | | | | | | | | | | | | | | | | |
| State/Country: | KOREA, REPUBLIC OF | | | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td>Name:</td> <td>Industry-University Cooperation Foundation Sogang University</td> </tr> <tr> <td>Street Address:</td> <td>1Sinsu-dong, Mapo-gu</td> </tr> <tr> <td>City:</td> <td>Seoul</td> </tr> <tr> <td>State/Country:</td> <td>KOREA, REPUBLIC OF</td> </tr> <tr> <td>Postal Code:</td> <td>121-742</td> </tr> </table> | | Name: | Industry-University Cooperation Foundation Sogang University | Street Address: | 1Sinsu-dong, Mapo-gu | City: | Seoul | State/Country: | KOREA, REPUBLIC OF | Postal Code: | 121-742 | | | | | | |
| Name: | Industry-University Cooperation Foundation Sogang University | | | | | | | | | | | | | | | | |
| Street Address: | 1Sinsu-dong, Mapo-gu | | | | | | | | | | | | | | | | |
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| Postal Code: | 121-742 | | | | | | | | | | | | | | | | |
| PROPERTY NUMBERS Total: 1 | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13605787</td> </tr> </tbody> </table> | | Property Type | Number | Application Number: | 13605787 | | | | | | | | | | | | |
| Property Type | Number | | | | | | | | | | | | | | | | |
| Application Number: | 13605787 | | | | | | | | | | | | | | | | |
| CORRESPONDENCE DATA | | | | | | | | | | | | | | | | | |
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| NAME OF SUBMITTER: | John L. Gase |
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Total Attachments: 5
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ASSIGNMENT

WHEREAS, I/WE

Hun-joo LEE, Jeong-gun LEE, Yeon-jeong KIM, Jong-myeon PARK, Mi-jeong SONG, Jin-mi OH all c/o Samsung Advanced Institute of Technology, San 14-1 Nongseo-dong, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea

hereinafter referred to as Assignor, have invented a certain invention entitled:

DEVICE FOR DETECTING AND SEPARATING TARGET MOLECULES AND METHOD FOR DETECTING AND SEPARATING TARGET MOLECULES BY USING THE SAME

for which invention an application (provisional or non-provisional) for a U.S. patent was filed on September 6, 2012, under U.S. Application No. 13/605,787, and

WHEREAS, SAMSUNG ELECTRONICS CO., LTD. of 416 Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, hereinafter referred to as Assignee, is desirous of acquiring the entire right, title, and interest in, to, and under the invention described in the patent application, including the entire priority right derived from the application,

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged,

Assignor assigns and transfers to Assignee and Assignee's legal representatives, successors, and assigns the entire right, title, and interest in, to, and under the invention, the referenced patent application, and other such applications (e.g., provisional applications, non-provisional applications, continuations, continuations-in-part, divisionals, reissues, reexaminations, national and regional phase applications, petty patent applications, and utility model applications) that may be filed in the U.S. and/or any country foreign to the U.S. on the invention, and the patents that may issue thereon,

Assignor conveys to the Assignee the right to make applications in Assignee's own behalf for protection of the invention in the U.S. and countries foreign to the U.S. and to claim priority to the referenced patent application and other such applications that may be filed in the U.S. or any country foreign to the U.S. on the invention under the Patent Cooperation Treaty, the Paris Convention, and any other international arrangements,

Assignor will not execute any writing or do any act conflicting with the terms of this assignment,

Assignor will at any time upon request, without further or additional consideration, but at the expense of the Assignee, execute such additional assignments and other writings and do such additional acts as the Assignee may deem necessary or desirable to pursue the patent applications identified herein, including, but not limited to, rendering all necessary assistance in making applications for and obtaining patents that may issue thereon in the U.S. and any

countries foreign to the U.S. on the invention, and in enforcing any rights accruing as a result of such applications or patents, by, for example, executing statements and other affidavits,

Assignor and Assignee agree the terms of this assignment shall bind, and inure to the benefit of, the legal representatives, successors, and assigns of all parties hereto,

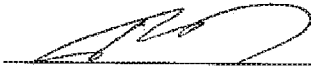
Assignor authorizes Assignee to insert in this assignment the number and filing date of the application if the number and filing date of the application are not recited herein at the time of execution of this assignment by any or all of the parties hereto,

Assignor and Assignee agree that U.S. law governs this assignment, and

Assignee acknowledges and accepts this assignment.

IN WITNESS WHEREOF, Assignor has hereunder set his/her hand on the date shown below.

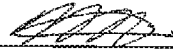
Date August 28, 2012



Assignor: Hun-joo LEE

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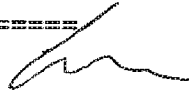
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Assignor: Jeong-gun LEE

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Date August 28, 2012



Assignor: Yeon-jeong KIM

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Date August 28, 2012



Assignor: Jong-myeon PARK

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Date August 28, 2012



Assignor: Mi-jeong SONG

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Date August 28, 2012



Assignor: Jin-mi OH

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ASSIGNMENT

WHEREAS, I

Jeong-woo CHOI of 103-603 Yongsan Citypark, 63-389 Hangang 3-ga, Yongsan-gu, Seoul, KR,

hereinafter referred to as Assignor, have invented a certain invention entitled:

DEVICE FOR DETECTING AND SEPARATING TARGET MOLECULES AND METHOD FOR DETECTING AND SEPARATING TARGET MOLECULES BY USING THE SAME

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NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged,

Assignor assigns and transfers to Assignee and Assignee's legal representatives, successors, and assigns the entire right, title, and interest in, to, and under the invention, the referenced patent application, and other such applications (e.g., provisional applications, non-provisional applications, continuations, continuations-in-part, divisionals, reissues, reexaminations, national and regional phase applications, petty patent applications, and utility model applications) that may be filed in the U.S. and/or any country foreign to the U.S. on the invention, and the patents that may issue thereon,

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Assignor will not execute any writing or do any act conflicting with the terms of this assignment,

Assignor will at any time upon request, without further or additional consideration, but at the expense of the Assignee, execute such additional assignments and other writings and do such additional acts as the Assignee may deem necessary or desirable to pursue the patent applications identified herein, including, but not limited to, rendering all necessary assistance in making applications for and obtaining patents that may issue thereon in the U.S. and any countries foreign to the U.S. on the invention, and in enforcing any rights accruing as a result of such applications or patents, by, for example, executing statements and other affidavits,

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Date August 28, 2012

Jeong-woo Choi
Assignor: Jeong-woo CHOI

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