TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies).

<table>
<thead>
<tr>
<th>Submission Type</th>
<th>Conveyance Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>Assignment</td>
</tr>
<tr>
<td></td>
<td>Security Agreement</td>
</tr>
<tr>
<td></td>
<td>License</td>
</tr>
<tr>
<td></td>
<td>Change of Name</td>
</tr>
<tr>
<td></td>
<td>Merger</td>
</tr>
<tr>
<td></td>
<td>Other Confirmatory License</td>
</tr>
<tr>
<td></td>
<td>U.S. Government</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>Conveyance Type</td>
</tr>
</tbody>
</table>

Conveying Party(ies)

Mark if additional names of conveying parties attached: [ ]

<table>
<thead>
<tr>
<th>Name (line 1)</th>
<th>Name (line 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOHNS HOPKINS UNIVERSITY</td>
<td></td>
</tr>
</tbody>
</table>

Second Party

<table>
<thead>
<tr>
<th>Name (line 1)</th>
<th>Name (line 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Receiving Party

Mark if additional names of receiving parties attached: [ ]

<table>
<thead>
<tr>
<th>Name (line 1)</th>
<th>Name (line 2)</th>
<th>Address (line 1)</th>
<th>Address (line 2)</th>
<th>Address (line 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Institutes of Health, The</td>
<td>Extramural Inventions Office, The</td>
<td>6701 Rockledge Drive, Room 3188</td>
<td>MSC 7750</td>
<td>Bethesda, Maryland / USA 20892-7750</td>
</tr>
</tbody>
</table>

Domestic Representative Name and Address

Enter for the first Receiving Party only.

<table>
<thead>
<tr>
<th>Name</th>
<th>Address (line 1)</th>
<th>Address (line 2)</th>
<th>Address (line 3)</th>
<th>Address (line 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

FOR OFFICE USE ONLY

Public burden reporting for this collection of information is estimated to average approximately 30 minutes per Cover Sheet to be recorded, including time for reviewing the document and gathering the data needed to complete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information Officer, Washington, D.C. 20231, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 20503. See OMB information Collection Budget Package 0651-0027, Patent and Trademark Assignment Practice. DO NOT SEND REQUESTS TO RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.
Correspondent Name and Address

Name: National Institutes of Health, The.

Address (line 1): Extramural Inventions Office, The

Address (line 2): 6701 Rockledge Drive, Room 3188

Address (line 3): MSC 7750

Address (line 4): Bethesda, Maryland / USA 20892-7750

Pages:
Enter the total number of pages of the attached conveyance document including any attachments. # 1

Application Number(s) or Patent Number(s)

Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s): 08656716

Patent Number(s): 5786146

If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. Month Day Year

Patent Cooperation Treaty (PCT)

Enter PCT application number only if a U.S. Application Number has not been assigned.

Number of Properties

Enter the total number of properties involved. # 1

Fee Amount

Fee Amount for Properties Listed (37 CFR 3.41): $ 

Method of Payment:
Enclosed □ Deposit Account □
(Enter for payment by deposit account or if additional fees can be charged to the account.)

Deposit Account Number: #

Authorization to charge additional fees: Yes □ No X

Statement and Signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.

Belen Awetahegne □ □

Name of Person Signing

Signature

Date 11/9/98
LICENSE TO THE UNITED STATES GOVERNMENT

Invention Title: Method of Detection of Methylated Nucleic Acid Using Agents Which Modify Unmethylated Cytosine and Distinguishing Modified Methylated and Non-Methylated Nucleic Acids

Inventor(s): Baylin and Herman

JHU Reference: 3057

NIH EIR: 4134401-96-0026

Patent or Application Serial No.: USSN 08/656,716 Patent #5,786,146

U.S. Filing/Issue Date: 06/03/96 07/28/98

Grant/Contract Identification Number(s): CA43318, CAS4396

Foreign Applications filed/intended in (countries):

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 through 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 above-identified patent application.

Signed this 17th day of August, 1998.

By: [Signature]

Howard W. Califano
Assistant Dean and Director, Office of Technology Licensing
Johns Hopkins University
School of Medicine
2024 E. Monument Street
Suite 2-100
Baltimore, Maryland 21205