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PATENT ASSIGNMENT

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
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| NATURE OF CONVEYANCE: | EXECUTIVE ORDER 9424, CONFIRMATORY LICENSE |

CONVEYING PARTY DATA

| Name | Execution Date |
|--|----------------|
| SLOAN-KETTERING INSTITUTE FOR CANCER RES | 07/12/2012 |

RECEIVING PARTY DATA

| IIName: | National Institutes of Health (NIH), U.S. Dept. of Health and Human Services (DHHS), U.S. Government | |
|-------------------|--|--|
| Street Address: | NIH Division of Extramural Inventions and Technology Resources (DEITR) | |
| Internal Address: | 6705 Rockledge Drive, Suite 310, MSC 7980 | |
| City: | Bethesda | |
| State/Country: | MARYLAND | |
| Postal Code: | 20892-7980 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|----------------|---------|
| Patent Number: | 7541179 |

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Total Attachments: 1

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PATENT REEL: 028687 FRAME: 0244

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| Sign and submit the executed document to the appropriate funding agency (e.g. upload in iEdison). |
|---|
| Invention Title: Vector encoding human globin gene and use thereof in treatment of |
| hemoglobinopathies |
| Inventor(s): Michel WJ Sadelain, Chad May, Stefano Rivella, Joseph R. Bertino |
| U.S. Filing/Issue Date: 07/02/2009 |
| Patent or Application Serial No.: 7,541,179 |
| Grant/Contract Number(s): HL057612 |
| 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, FAR 52.227-11 or FAR 52.227-12 (if applicable) which are included among the terms of the above identified grant or contract award from the United State Government. This document is confirmatory of: |
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| Signed this 12th day of 12012 By E(ic Cottinator (Signature) (Signature) |
| Title Vice President, PTM |
| For SLOAN-KETTERING INSTITUTE FOR CANCER RES (Grantee/Contractor Organization) |
| At Office of Industrial Affairs 1275 York Avenue New York, NY 10065 US (Business Address) |

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RECORDED: 07/31/2012