504707700 12/29/2017

PATENT ASSIGNMENT COVER SHEET

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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 |
|------------------|----------------|
| EMORY UNIVERSITY | 12/14/2017 |

RECEIVING PARTY DATA

| Name: | 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 |
|---------------------|----------|
| Application Number: | 15128912 |

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NAME OF SUBMITTER:DIRECTOR, DEITR, NIHSIGNATURE:/Director, DEITR, NIH/DATE SIGNED:12/29/2017

Total Attachments: 1

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PATENT 504707700 REEL: 044974 FRAME: 0732

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| Sign and submit the executed document to the appropriate funding agency (e.g. upload in lEdison). |
|---|
| Invention Title: Liver-Optimized Coagulation FVIII Expression Cassetts |
| Inventor(s): Harrison Brown, Christopher Doering, Harold Spencer |
| U.S. Filing/Issue Date: 09/23/2016 |
| Patent or Application Serial No.: 15/128, 912 |
| Grant/Contract Number(s): HL092179 ; HL112309 |
| Foreign Applications filed/intended in (countries): China, Europe and India |
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| At 1599 Clifton Road NE, 4th Floor Atlanta, GA 30322 |

PATENT REEL: 044974 FRAME: 0733

RECORDED: 12/29/2017

(Business Address)