

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4906296

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
KENNETH HEUERMANN	08/11/2017
CAROL KREADER	08/11/2017
JAIME ROBERT	01/10/2018
BRIAN WARD	08/11/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SIGMA-ALDRICH CO. LLC
<b>Street Address:</b>	3050 SPRUCE STREET
<b>City:</b>	SAINT LOUIS
<b>State/Country:</b>	MISSOURI
<b>Postal Code:</b>	63103
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15550559
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(314)236-8712
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	314-286-7465
<b>Email:</b>	milliporesigma.patents@emdmillipore.com
<b>Correspondent Name:</b>	BENJAMIN JOHN SODEY
<b>Address Line 1:</b>	3050 SPRUCE STREET
<b>Address Line 4:</b>	SAINT LOUIS, MISSOURI 63103
<b>ATTORNEY DOCKET NUMBER:</b>	SIG218USN
<b>NAME OF SUBMITTER:</b>	BENJAMIN JOHN SODEY
<b>SIGNATURE:</b>	/Benjamin John Sodey/
<b>DATE SIGNED:</b>	04/09/2018
<b>Total Attachments: 6</b>	
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**ASSIGNMENT**

**WHEREAS**, Kenneth E. Heuermann, Carol A. Kreader, Jaime Robert, and Brian W. Ward, all of 3050 Spruce Street, St. Louis, MO, USA, 63103; hereinafter referred to as “ASSIGNOR”), desire to transfer certain rights for an invention (the “INVENTION”) relating to an improvement in **DIRECTIONAL AMPLIFICATION OF RNA** (SIG218USN) and has executed an application for a United States patent based thereon Application Serial No. 15/550,559, filed August 11, 2017;

**AND, WHEREAS**, Sigma-Aldrich Co. LLC, having its principal place of business at 3050 Spruce Street, St. Louis, Missouri 63103 (hereinafter referred to as “ASSIGNEE”), is desirous of acquiring certain rights thereunder;

**NOW, THEREFORE**, for other good and valuable consideration, receipt of all of which is hereby acknowledged, I have agreed to and do hereby sell, assign and transfer unto said ASSIGNEE the entire right, title and interest in and throughout the United States of America (including its territories and dependencies) and all countries foreign thereto in and to said invention, said United States application, any other United States applications (including divisional, continuing or reissue applications) based in whole or in part on said United States application or in whole or in part on said invention, any foreign applications based in whole or in part on any of the aforesaid United States applications or in whole or in part on said invention, and any and all patents (including extensions thereof) of any country which have been or may be granted on any of the aforesaid applications or on said invention or any part thereof;

**TO BE HELD AND ENJOYED** by said ASSIGNEE, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by me had no sale and assignment of said interest been made;

**AND I** hereby authorize and request the Commissioner of Patents of the United States of America to issue any and all United States patents which may be granted upon said United States applications or any of them, or upon said invention or any part thereof, to said ASSIGNEE;

**AND I** hereby agree for myself and for my heirs, executors and administrators, to execute without further consideration any further lawful documents and any further assurances, and any divisional, continuing, reissue, or other applications for patents of any country, that may be deemed necessary by said ASSIGNEE fully to secure to said ASSIGNEE its interest as aforesaid in and to said invention or any part thereof, and in and to said several patents or any of them;

**AND I** hereby covenant for myself and my legal representatives, and agree with said ASSIGNEE, its successors and assigns, that I have granted no right or license to make, use or sell said invention, to anyone except said ASSIGNEE, that prior to the execution of this deed my right, title and interest in said invention had not been otherwise encumbered, and that I have not executed and will not execute any instrument in conflict herewith.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal.

  
KENNETH HEUERMANN

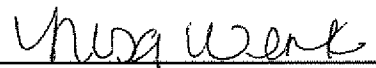
7/11/17  
Date

### ACKNOWLEDGMENT

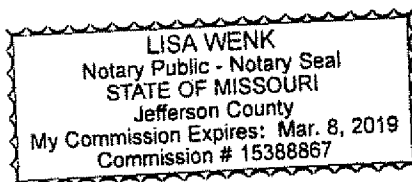
STATE OF MO }  
COUNTY OF St. Louis } SS.

On this 11 day of August, 2017, before me, a Notary Public, personally appeared KENNETH HEUERMANN, to me known to be the person described in, and who executed, the foregoing document and acknowledged that he executed said instrument as his free act and deed.

In Testimony Whereof, I have hereunto set my hand and affixed my official seal the day and year first above written.

  
Notary Public

My Commission Expires:



03/08/2019 [SEAL]

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal.

Carol Kreader  
CAROL KREADER

8/11/17  
Date

# ACKNOWLEDGMENT

STATE OF MO )  
COUNTY OF St. Louis } SS.

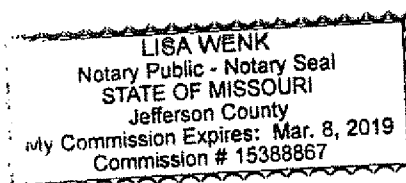
On this 11 day of August, 2017, before me, a Notary Public, personally appeared CAROL KREADER, to me known to be the person described in, and who executed, the foregoing document and acknowledged that he executed said instrument as his free act and deed.

In Testimony Whereof, I have hereunto set my hand and affixed my official seal the day and year first above written.

Lisa Wenk  
Notary Public

My Commission Expires:

03/08/2019 [SEAL]



IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal.

Jaime Robert  
JAIME ROBERT

1/10/18  
Date

# ACKNOWLEDGMENT

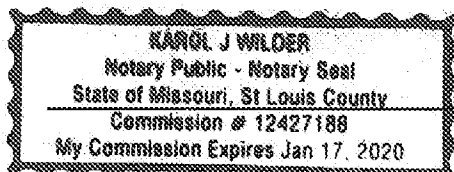
STATE OF MISSOURI }  
COUNTY OF ST. LOUIS } SS.

On this 10<sup>th</sup> day of JANUARY, 2018, before me, a Notary Public, personally appeared JAIME ROBERT, to me known to be the person described in, and who executed, the foregoing document and acknowledged that he executed said instrument as his free act and deed.

In Testimony Whereof, I have hereunto set my hand and affixed my official seal the day and year first above written.

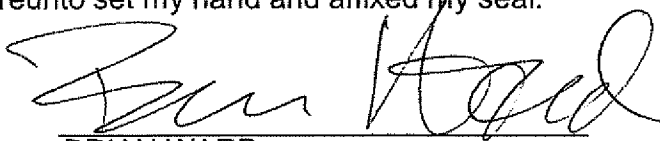
Karel J. Wilder  
Notary Public

My Commission Expires:



[SEAL]

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal.



BRIAN WARD


8/11/17  
Date

# ACKNOWLEDGMENT

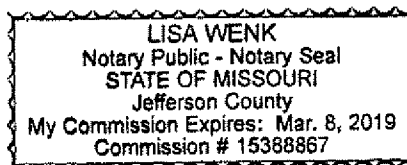
STATE OF MO )  
COUNTY OF St. Louis } SS.

On this 11 day of August, 2017, before me, a Notary Public, personally appeared BRIAN WARD, to me known to be the person described in, and who executed, the foregoing document and acknowledged that he executed said instrument as his free act and deed.

In Testimony Whereof, I have hereunto set my hand and affixed my official seal the day and year first above written.

  
Notary Public

My Commission Expires:



03/08/2019 [SEAL]