504356850 05/08/2017

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KEVIN M. ALLAN	05/06/2015
SHINJI FUJIMORI	05/01/2015
LARS V. HEUMANN	05/10/2015
GRACE MAY HUYNH	05/11/2015
KATIE ANN KEATON	05/11/2015
CHRISTOPHER M. LEVINS	05/01/2015
GANAPATI REDDY PAMULAPATI	05/01/2015
BENJAMIN JAMES ROBERTS	05/01/2015
KESHAB SARMA	05/01/2015
MARTIN GERALD TERESK	04/29/2015
XIANG WANG	05/11/2015
SCOTT ALAN WOLCKENHAUER	05/01/2015

RECEIVING PARTY DATA

Name:	GILEAD PHARMASSET LLC	
Street Address:	333 LAKESIDE DRIVE	
City:	FOSTER CITY	
State/Country:	CALIFORNIA	
Postal Code:	stal Code: 94404	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15582224

CORRESPONDENCE DATA

Fax Number:

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.

Email: naoko.folkman@gilead.com
Correspondent Name: GILEAD SCIENCES, INC.
Address Line 1: 333 LAKESIDE DRIVE

Address Line 4: FOSTER CITY, CALIFORNIA 94404

PATENT REEL: 042283 FRAME: 0090

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ATTORNEY DOCKET NUMBER:	PH1046.PC	
NAME OF SUBMITTER:	TIMOTHY A. MARQUART	
SIGNATURE:	/Timothy A. Marquart/	
DATE SIGNED: 05/08/2017		
Total Attachments: 8		
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PATENT

REEL: 042283 FRAME: 0091

ASSIGNMENT BY INVENTORS

THIS ASSIGNMENT, made by Kevin M. Allan; Shinji Fujimori; Lars V. Heumann; Grace May Huynh; Katie Ann Keaton; Christopher M. Levins; Ganapati Reddy Pamulapati; Benjamin James Roberts; Keshab Sarma; Xiang Wang and Scott Alan Wolckenhauer, who have a mailing address at c/o Gilead Sciences, Inc., 333 Lakeside Drive, Foster City, California 94404 USA and Martin Gerald Teresk who resides at 6150 Southlake Dr., Parkville, MO 64152 USA (hereinafter referred to as Assignors) respectively;

WHEREAS, Assignors have invented certain new and useful improvements in PROCESSES FOR PREPARING ANTIVIRAL COMPOUNDS, set forth in a Patent application for Letters Patent of the United States, for which Assignors have filed an application for patent both under the Patent Cooperation Treaty (PCT) and in the United States of America concurrently herewith. Where this Assignment is not filed concurrently with the application, the following identifying information may be added after execution:

U.S.	Serial	No.:	14/733,139	Filing Date:	June 08, 2015
PCT	Serial	No::	PCT/US2015/034655	Filing Date:	June 08, 2015

WHEREAS, Gilead Pharmasset LLC, a Limited Liability Company organized under and pursuant to the laws of Delaware having its principal place of business at 333 Lakeside Drive, Foster City, California 94404 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefore and thereon.

NOW, THEREFORE, to all whom it may concern, be it known that for good and sufficient consideration, the receipt of which is hereby acknowledged, Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and

assigns, the entire right, title and interest in and to the above-mentioned inventions and applications for Letters Patent, and in and to any and all direct and indirect provisionals, national stage applications, divisions, continuations, continuations-in-part, substitutions, and reissues of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefore and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

I hereby grant Assignee(s), the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark office for recordation of this document, including the power to insert on this assignment the application number and filing date of said application when known.

Date:	06 med 2018	Signature:	Keyin M. Allan
Date:	1 MAY 2015	Signature:	Shinji Fujimori
Date:	IOMAY LOIS	Signature:	Lars V. Meumann
Date:	11 May 2015	Signature:	Muse May Hugh I Grace May Huynh
Date:	11 May 2015	Signature:	ZCZ Katie Ann Keaton
Date:	<u>OLMAY2015</u>	Signature:	Christopher M. Levins
Date:	01 May 2015	Signature:	トル・ルー Ganapati Reddy Pamulapati
Date:	01 MAY 2015	Signature:	Benjamin James Roberts

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Date:	<u> </u>	Signature:	Cestab Sarma
Date:		Signature:	Martin Gerald Teresk
Date:	11 May 2015	Signature:	Xiang Wang
Date:	[May 2015	Signature:	Scott Alan Wolckenhauer

ASSIGNMENT BY INVENTORS

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NOW, THEREFORE, to all whom it may concern, be it known that for good and sufficient consideration, the receipt of which is hereby acknowledged, Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign,

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transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and applications for Letters Patent, and in and to any and all direct and indirect provisionals, national stage applications, divisions, continuations, continuations-in-part, substitutions, and reissues of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefore and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

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AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

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Date:	 Signature: _	Kevin M. Allan
Date:		Shinji Fujimori
Date:	 Signature: _	Lars V. Heumann
Date:		Grace May Huynh
Date:	 Signature:	Katie Ann Keaton
Date:	 Signature:	Christopher M. Levins
Date:	 Signature:	Ganapati Reddy Pamulapati
Date:	 Signature:	Benjamin James Roberts

vale.		oignature: _	Keshab Sarma
Date:	4/29/15	Signature:	<u>Mustin Gerald Teresk</u> Martin Gerald Teresk
Date:		Signature:	Xiang Wang
Date:		Signature: _	Scott Alan Wolckenhauer

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RECORDED: 05/08/2017