

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
STEFAN ABELE	09/26/2014
HANS MEIER	09/24/2014
GUNTHER SCHMIDT	09/26/2014
HEINZ STEINER	09/24/2014
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<b>Street Address:</b>	GEWERBESTRASSE 16
<b>City:</b>	ALLSCHWIL
<b>State/Country:</b>	SWITZERLAND
<b>Postal Code:</b>	CH-4123
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14397421
<b>CORRESPONDENCE DATA</b>	
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<b>ATTORNEY DOCKET NUMBER:</b>	66535.000064
<b>NAME OF SUBMITTER:</b>	ROBERT M. SCHULMAN
<b>SIGNATURE:</b>	/31196/
<b>DATE SIGNED:</b>	10/29/2014
<b>Total Attachments: 6</b>	
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## ASSIGNMENT

WHEREAS, WE, ABELE, Stefan, residing at Oberwil, Switzerland; MEIER, Hans, residing at Basel, Switzerland; SCHMIDT, Gunther, residing at Basel, Switzerland; STEINER, Heinz, residing at Bubendorf, Switzerland, have invented certain new and useful improvements in and to the subject matter of:

### PROCESS FOR MANUFACTURING NAPHTHYRIDINE DERIVATIVES

described in an application for United States Letters Patent filed on **October 27, 2014**, and accorded U.S. Patent Application No. **14/397,421**.

AND, WHEREAS, ACTELION PHARMACEUTICALS LTD, a corporation organized under the laws of SWITZERLAND, having a place of business located at Gewerbestrasse 16, Allschwil, SWITZERLAND CH-4123 (hereinafter "ASSIGNEE"), is desirous of acquiring certain rights to the improvements and under the application;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration, receipt of which is hereby acknowledged, WE do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, our 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 improvements, said United States application, any other United States applications, including provisional, divisional, renewal, substitute, continuation, reexamination and reissue applications, based in whole or in part on said United States application or in whole or in part on said improvements, any foreign applications, including international and regional applications, based in whole or in part on any of the aforesaid United States applications or in whole or in part on said improvements, and in and to any and all letters patent, including extensions thereof, of any country which have been or may be granted on any of the aforesaid applications or on said improvements or any parts thereof;

AND WE hereby authorize and request our agents, Hunton & Williams LLP, whose address is 2200 Pennsylvania Avenue, N.W., Washington, DC 20037, to insert hereon any identification necessary or desirable for recordation of this document, including the filing date and application number of said application when known.

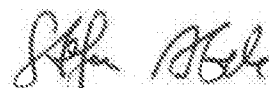
AND WE hereby agree for ourselves and our heirs, executors and administrators to execute without further consideration any further documents and instruments which may be necessary, lawful and proper in the prosecution of said above-referenced application or in the preparation or prosecution of any continuing, substitute, divisional, renewal, reexamination or reissue application or in any amendments, extensions or interference proceedings, or other applications for patents of any region or country, that may be necessary to secure to ASSIGNEE its interest and title in and to said improvements or any parts thereof, and in and to said several patents or any of them;

AND WE hereby covenant for ourselves and our legal representatives, and agree with said ASSIGNEE, its successors and assigns, that WE have granted no right or license to make, use, sell or offer to sell said improvements, to anyone except said ASSIGNEE, that prior to the execution of this deed, our right, title and interest in said improvements had not been otherwise encumbered, and that WE have not and will not execute any instrument in conflict therewith;

AND WE do hereby authorize and request the Director of the United States Patent and Trademark Office to issue any and all letters patent which may be granted upon said United States applications, or upon said improvements or any parts thereof when granted, to said ASSIGNEE.

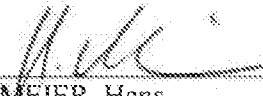
IN WITNESS WHEREOF, I have hereunto set my hand and seal.

26 Sep 2017  
Date

  
ABELE, Stefan

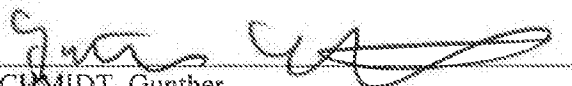
IN WITNESS WHEREOF, I have hereunto set my hand and seal.

24.09.2014  
Date

  
MEIER, Hans

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

26-Sep-2014  
Date

  
SCHMIDT, Gunther

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

24. September 2014  
Date

H. Steiner  
STEINER, Heinz