PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	NUNC PRO TUNC ASSIGNMENT	
EFFECTIVE DATE:	12/29/2017	
SEQUENCE:	2	

CONVEYING PARTY DATA

Name	Execution Date
MALLINCKRODT PHARMA IP TRADING D.A.C.	05/24/2019

RECEIVING PARTY DATA

Name:	MALLINCKRODT IP UNLIMITED COMPANY	
Street Address:	COLLEGE BUSINESS & TECHNOLOGY PARK	
Internal Address:	CRUISERATH, BLANCHARDSTOWN	
City:	DUBLIN	
State/Country:	IRELAND	
Postal Code:	15	

PROPERTY NUMBERS Total: 18

Property Type	Number
Patent Number:	7375216
Patent Number:	8735574
Patent Number:	9181285
Patent Number:	9688705
Patent Number:	9902745
Patent Number:	7960371
Patent Number:	8530458
Patent Number:	8835416
Patent Number:	9107927
Patent Number:	9517239
Patent Number:	6818763
Patent Number:	7777028
Patent Number:	8178664
Patent Number:	10273255
Application Number:	13691677
Application Number:	16125190
Application Number:	16300362

PATENT REEL: 049274 FRAME: 0954

505492495

Property Type	Number		
Application Number:	16298603		

CORRESPONDENCE DATA

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NAME OF SUBMITTER:	CARLYNN FERGUSON DAVIS	
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DATE SIGNED:	05/24/2019	

Total Attachments: 2 source=Deed 2#page1.tif source=Deed 2#page2.tif

PATENT REEL: 049274 FRAME: 0955

ASSIGNMENT AGREEMENT

WHEREAS, Mallinckrodt Pharma IP Trading D.A.C., an Irish designated activity company located at College Business & Technology Park, Cruiserath, Blanchardstown, Dublin 15, Ireland ("Assignor"), is the owner of the entire right, title and interest in and to the patents and patent applications described below and the corresponding inventions as described and claimed therein (collectively "Patent Properties"):

Status	Application	File date	Patent No.	Issue Date	Title
		1			Methods For Treating Hyperbilirubinemia With
Published	13/691,677	11/30/2012		1	Stannsoporfin
Granted	10/812,156	3/29/2004	7,375,216	5/20/2008	Preparation Of Metal Mesoporphyrin Halide Compounds
Granted	13/435,868	3/30/2012	8,735,574	5/27/2014	Methods For Synthesizing Metal Mesoporphyrins
				11/10/201	
Granted	14/253,710	4/15/2014	9,181,285	5	Methods For Synthesizing Metal Mesoporphyrins
Granted	14/875,141	10/5/2015	9,688,705	6/27/2017	Methods For Synthesizing Metal Mesoporphyrins
Granted	15/343,967	11/4/2016	9,902,745	2/27/2018	High-Purity Large-Scale Preparation Of Stannsoporfin
Granted	11/867,559	10/4/2007	7,960,371	6/14/2011	High-Purity Large-Scale Preparation Of Stannsoporfin
Granted	12/968,651	12/15/2010	8,530,458	9/10/2013	High-Purity Large-Scale Preparation Of Stannsoporfin
Granted	14/019,513	9/5/2013	8,835,416	9/16/2014	High-Purity Large-Scale Preparation Of Stannsoporfin
Granted	14/460,080	8/14/2014	9,107,927	8/18/2015	High-Purity Large-Scale Preparation Of Stannsoporfin
Granted	14/793,921	7/8/2015	9,517,239	12/13/201 6	High-Purity Large-Scale Preparation Of Stannsoporfin
Granted	10/453,815	6/3/2003	6,818,763	11/16/200 4	Preparation Of Metal Mesoporphyrin Halide Compounds
Granted	11/957,317	12/14/2007	7777028	8/17/2010	Preparation Of Metal Mesoporphyrin Compounds
Granted	12/833,873	7/9/2010	8178664	5/15/2012	Preparation Of Metal Mesoporphyrin Compounds
Granted	15/867,900	1/11/2018	10,273,25 5	4/30/2019	High-Purity Large-Scale Preparation Of Stannsoporfin
Published	16/125,190	9/7/2018	\		Methods For Synthesizing Metal Mesoporphyrins
Pending	16/300,362	11/9/2018			Methods For Treating Hyperbilirubinemia With Stannsoporfin And Phototherapy
Pending	16/298,603	3/11/2019			High-Purity Large-Scale Preparation Of Stannsoporfin

PATENT REEL: 049274 FRAME: 0956 AND WHEREAS, Mallinckrodt IP Unlimited Company, an Irish private unlimited company located at College Business & Technology Park, Cruiserath, Blanchardstown, Dublin 15, Ireland ("Assignee"), is desirous of acquiring the entire right, title and interest in and to the Patent Properties and in and to any letters patent that may be granted therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNORS hereby sell, assign and transfer unto said ASSIGNEE, their entire worldwide right, title and interest in and to the Patent Properties, and to any and all letters patent which may be granted as a result thereof in the United States of America, in the territorial possessions of the United States of America and in any and all foreign countries, and to any and all divisions, reissues and continuations thereof, including the right to sue and recover damages for past infringement, the right to file foreign applications directly in the name of ASSIGNEE, the right to claim priority rights deriving from the Patent Properties to which said foreign applications are entitled by virtue of international convention, treaty or otherwise, said inventions and all letters patent on said inventions to be held and enjoyed by ASSIGNEE and its successors and assigns as fully and entirely as the same would have been held and enjoyed by ASSIGNOR had this sale, assignment and transfer not been made.

Executed the JYM day of Muy 2019 (Execution date)

Mallinckrodt Pharma IP Trading D.A.C.

BA:

Name: Carlynn Davis Title: Attorney-in-fact

Mallinckrodt IP Unlimited Company

By:

Name: Carlynn Davis Title: Attorney-in-fact

> PATENT REEL: 049274 FRAME: 0957

RECORDED: 05/24/2019