

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table><tr><th>Name</th><th>Execution Date</th></tr><tr><td>Michael Wade</td><td>12/15/2006</td></tr><tr><td>Roger Andrew Jeffs</td><td>12/15/2006</td></tr><tr><td>Kathryn Bronstein</td><td>12/28/2006</td></tr><tr><td>Deborah Strootman</td><td>12/18/2006</td></tr></table>	Name	Execution Date	Michael Wade	12/15/2006	Roger Andrew Jeffs	12/15/2006	Kathryn Bronstein	12/28/2006	Deborah Strootman	12/18/2006	
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Michael Wade	12/15/2006										
Roger Andrew Jeffs	12/15/2006										
Kathryn Bronstein	12/28/2006										
Deborah Strootman	12/18/2006										
RECEIVING PARTY DATA											
Name:	United Therapeutics Corporation										
Street Address:	1110 Spring Street										
City:	Silver Spring										
State/Country:	MARYLAND										
Postal Code:	20910										
PROPERTY NUMBERS Total: 1											
<table><tr><th>Property Type</th><th>Number</th></tr><tr><td>Application Number:</td><td>11012722</td></tr></table>	Property Type	Number	Application Number:	11012722							
Property Type	Number										
Application Number:	11012722										
CORRESPONDENCE DATA											
Fax Number:	(202)672-5399										
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>											
Phone:	(202) 672-5300										
Email:	PTOMailWashington@foley.com										
Correspondent Name:	Stephen B. Maebius										
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Address Line 4:	Washington, DISTRICT OF COLUMBIA 20007-5143										
ATTORNEY DOCKET NUMBER:	080618-0365										
NAME OF SUBMITTER:	Stephen B. Maebius										

OP \$40.00 11012722

Total Attachments: 4

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PATENT

REEL: 018735 FRAME: 0706

ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

United Therapeutics Corporation
1110 Spring Street
Silver Spring, Maryland 20910

(hereinafter referred to as "ASSIGNEE") its successors and assigns, the full and exclusive right, title and interest for the United States, its territories and possessions, and all foreign countries in and to this invention relating to

USE OF TREPROSTINIL TO IMPROVE KIDNEY FUNCTIONS

as set forth in this United States Patent Application

check one ☐ executed concurrently herewith,
 ☐ executed on _____,
 ☒ Serial No. 11/012,722 Filed 12/16/2004

as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application and all other applications for Letters Patent of the United States and countries foreign thereto for above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the International Convention and any other international agreement to which the United States adheres; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES ASSIGNEE to file patent applications in any or all countries on the above-identified invention or inventions in the name of the undersigned or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable under the International Convention or otherwise.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the **sole use and benefit** of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, and declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of **Foley & Lardner LLP** the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

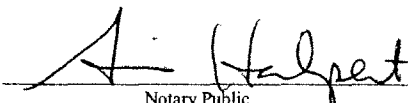
ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of **Foley & Lardner LLP** do not personally represent ASSIGNOR OR ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

Executed this 15 day of Dec, 2006


MICHAEL WADE

State of MARYLAND)
County of MONTGOMERY)ss.


On this 15th day of DECEMBER, 2006, before me, a notary public in and for said county, appeared MICHAEL WADE, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and he/she acknowledged that he/she signed, sealed, and delivered the said instrument as his/her free and voluntary act for the uses and purposes therein set forth.


Notary Public

My Commission Expires: 05-01-2010

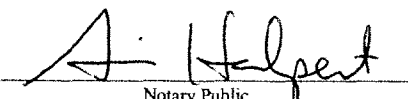
(Seal)

Executed this 15 day of December 2006


ROGER ANDREW JEFFS

State of MARYLAND)
County of MONTGOMERY)ss.

On this 15th day of DECEMBER, 2006, before me, a notary public in and for said county, appeared ROGER ANDREW JEFFS, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and he/she acknowledged that he/she signed, sealed, and delivered the said instrument as his/her free and voluntary act for the uses and purposes therein set forth.


Notary Public

My Commission Expires: 05-01-2010

(Seal)

Executed this 21th day of December, 2006

Kathryn Bronstein
KATHRYN BRONSTEIN

State of MARYLAND)
County of MONTGOMERY)ss.

On this 28th day of DECEMBER, 2006, before me, a notary public in and for said county, appeared KATHRYN BRONSTEIN, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and he/she acknowledged that he/she signed, sealed, and delivered the said instrument as his/her free and voluntary act for the uses and purposes therein set forth.

A. Halpert
Notary Public

My Commission Expires: 05-01-2010

(Seal)

Executed this 18 day of DEC, 2006

Deborah Strootman
DEBORAH STROOTMAN

State of MARYLAND)
County of MONTGOMERY)ss.

On this 28th day of DECEMBER, 2006, before me, a notary public in and for said county, appeared DEBORAH STROOTMAN, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and he/she acknowledged that he/she signed, sealed, and delivered the said instrument as his/her free and voluntary act for the uses and purposes therein set forth.

A. Halpert
Notary Public

My Commission Expires: 05-01-2010

(Seal)