

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Michael Francis Dube</td> <td>09/09/2013</td> </tr> <tr> <td>Anthony Richard Gerardi</td> <td>09/09/2013</td> </tr> <tr> <td>Christopher Junker</td> <td>09/09/2013</td> </tr> </tbody> </table>		Name	Execution Date	Michael Francis Dube	09/09/2013	Anthony Richard Gerardi	09/09/2013	Christopher Junker	09/09/2013		
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RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>R.J. Reynolds Tobacco Company</td> </tr> <tr> <td>Street Address:</td> <td>401 North Main Street</td> </tr> <tr> <td>City:</td> <td>Winston-Salem</td> </tr> <tr> <td>State/Country:</td> <td>NORTH CAROLINA</td> </tr> <tr> <td>Postal Code:</td> <td>27101</td> </tr> </table>		Name:	R.J. Reynolds Tobacco Company	Street Address:	401 North Main Street	City:	Winston-Salem	State/Country:	NORTH CAROLINA	Postal Code:	27101
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PROPERTY NUMBERS Total: 1											
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13962298</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13962298						
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CORRESPONDENCE DATA											
Fax Number:	9197552150										
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>											
Phone:	919-755-2100										
Email:	dgravius@wcsr.com										
Correspondent Name:	Jessica L. Gorczynski										
Address Line 1:	150 Fayetteville Street, Suite 2100										
Address Line 2:	Womble Carlyle Sandridge and Rice, LLP										
Address Line 4:	Raleigh, NORTH CAROLINA 27601										
ATTORNEY DOCKET NUMBER:	R60999 10190US.1 (0507.5)										
NAME OF SUBMITTER:	Jessica L. Gorczynski										
Signature:	/jessica l. gorczynski/										

Date:	10/01/2013
	This document serves as an Oath/Declaration (37 CFR 1.63).
<p>Total Attachments: 5 source=R60999_10190US_1_Combined_Assign_Decl-EXECUTED#page1.tif source=R60999_10190US_1_Combined_Assign_Decl-EXECUTED#page2.tif source=R60999_10190US_1_Combined_Assign_Decl-EXECUTED#page3.tif source=R60999_10190US_1_Combined_Assign_Decl-EXECUTED#page4.tif source=R60999_10190US_1_Combined_Assign_Decl-EXECUTED#page5.tif</p>	

**COMBINED WORLDWIDE INVENTION ASSIGNMENT AND
DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)**

WHEREAS, the undersigned (hereinafter referred to as "Assignor") has or may have invented certain inventions and improvements disclosed in the United States patent application entitled "**TOBACCO-DERIVED PYROLYSIS OIL**" and designated as

- Application No. 13/962,298; filed August 8, 2013
- Application claims priority from Application No. , filed , all applications listed above being hereinafter referred to as the "Application(s)";

WHEREAS, it is agreed that

R.J. Reynolds Tobacco Company
401 North Main Street
Winston-Salem, NC 27101-3804

(hereinafter referred to as "Assignee"), is entitled to or is desirous of acquiring all right, title and interest related to the same;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor, by these presents, does sell, assign, and transfer unto Assignee the full, exclusive and entire right, title and interest, worldwide: (i) in and to all inventions and improvements disclosed and described in the Application(s); (ii) in and to said Application(s) and any other United States national stage, provisional, non-provisional, divisional, continuation, continuation-in-part, or design patent applications based in whole or in part upon said inventions or improvements and/or claiming priority to said Application(s) (the "U.S. Applications"); (iii) in and to any Patent Cooperation Treaty applications based in whole or in part upon said inventions or improvements and/or claiming priority to said Application(s); (iv) in and to any and all applications for industrial property protection, including without limitation applications for patent, utility model, inventor's certificate, and design, filed or which are hereafter filed in countries outside the United States (the "Foreign Applications") and which describe in whole or in part said inventions and improvements, said Foreign Applications to be

filed and issued in the name of Assignee or its designee insofar as permitted by applicable law; (v) in and to all patents or similar protective rights in the United States or elsewhere which may be granted on the U.S. Applications and Foreign Applications and all reissues, reexaminations, and extensions thereof, any and all such patents or other protective rights to issue in the name of Assignee and for the sole use and behoof of Assignee and its successors and assigns; and (vi) in and to the right to claim any applicable foreign or domestic priority rights arising from or required for any of the aforementioned applications under the terms of any applicable conventions, treaties, statutes, or regulations.

AND, for the same consideration, Assignor agrees to (i) communicate to Assignee, its successors, legal representatives, and assigns, any facts known to Assignor respecting said inventions and improvements or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may embody said inventions or improvements; (ii) sign or execute all lawful papers, applications, declarations, affidavits, assignments, and rightful oaths that may be requested by Assignee during prosecution or enforcement of any rights related to the inventions and improvements; (iii) testify in any proceedings relating to said inventions or improvements or rights granted therefor; and (iv) generally do everything possible to aid Assignee and its successors, legal representatives and assigns, to obtain and enforce proper protection for all said inventions and improvements in all countries throughout the world.

Assignor covenants with Assignee, its successors, legal representatives, and assigns, that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned. Assignor further agrees that Assignee, its successors, legal representatives, and assigns, may insert into this Assignment any further text necessary or desirable to define the Applications to which the Assignment pertains for purposes of recordation, and also agrees that the Assignment is effective at least as early as August 8, 2013 the earliest priority date of the Application(s).

U.S. DECLARATION: Assignor intends for this Assignment to serve as a U.S. declaration under 37 CFR 1.63(e)(1). Accordingly, with respect to the U.S. Applications identified herein, each undersigned inventor hereby declares that: (1) the above-identified application was made or authorized to be made by me; (2) I believe that I am the original inventor or an original joint inventor of a claimed invention in the application; and (3) I hereby

09-09-2013
Date


CHRISTOPHER JUNKER

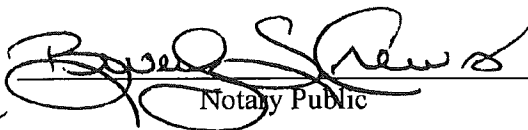
State of North Carolina
County of Forsyth

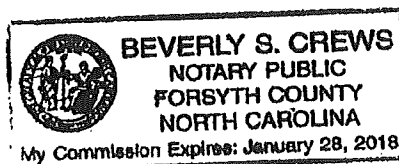
I, Beverly S Crews, a Notary Public for said County and State, do hereby certify that CHRISTOPHER JUNKER personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 9 day of September, 2013.

(Official Seal)

My commission expires 1/28/2018


Notary Public



acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

9/9/13
Date

Michael Francis Dube
MICHAEL FRANCIS DUBE

State of North Carolina)

County of Forsyth)

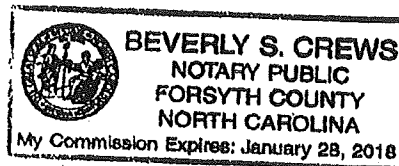
I, Beverly S Crews, a Notary Public for said County and State, do hereby certify that MICHAEL FRANCIS DUBE personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 9 day of September, 2013.

(Official Seal)

Beverly S Crews
Notary Public

My commission expires 1/28/2018



September 9, 2013
Date

Anthony Richard Gerardi
ANTHONY RICHARD GERARDI

State of North Carolina
County of Forsyth

I, Beverly S Crews, a Notary Public for said County and State, do hereby certify that ANTHONY RICHARD GERARDI personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 9 day of September, 2013.

(Official Seal)

Beverly S Crews
Notary Public

My commission expires 1/28/2018

