

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4511573

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
TOD WOOLF	08/05/2005
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	INVITROGEN CORPORATION
<b>Street Address:</b>	1600 FARADAY AVENUE
<b>City:</b>	CARLSBAD
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	92008
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15418653
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(760)476-6048
<i>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.</i>	
<b>Phone:</b>	(760)603-7200
<b>Email:</b>	LSGDocketing@thermofisher.com
<b>Correspondent Name:</b>	LIFE TECHNOLOGIES CORPORATION
<b>Address Line 1:</b>	ATTN: IP LEGAL DEPARTMENT
<b>Address Line 2:</b>	5823 NEWTON DRIVE
<b>Address Line 4:</b>	CARLSBAD, CALIFORNIA 92008
<b>ATTORNEY DOCKET NUMBER:</b>	IVGN418.12CON
<b>NAME OF SUBMITTER:</b>	GRACIE SEGOVIA
<b>SIGNATURE:</b>	/Gracie Segovia/
<b>DATE SIGNED:</b>	07/19/2017
<b>Total Attachments: 1</b>	
source=AsFiled_IVGN481CON12_Assignment_Woolf_20170719#page1.tif	

**ASSIGNMENT**

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned, does hereby:

SELL, ASSIGN AND TRANSFER to INVITROGEN CORPORATION (the "Assignee"), having a place of business at 1600 Faraday Avenue, Carlsbad, CA 92008, the entire right, title and interest for the United States and all foreign countries, in and to any and all improvements which are disclosed in the application for United States Letters Patent, Serial No. 11/049,636 filed on February 2, 2005, and is entitled DOUBLE-STRANDED OLIGONUCLEOTIDES, such application and all divisional, continuing, continuation-in-part, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT that, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, continuation-in-part, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof, and generally do everything possible which the Assignee shall consider desirable for securing, maintaining and enforcing proper patent protection for such improvements and for vesting title to such improvements in the Assignee;

TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

(Signature) Tod M. Woolf Date: 8/5/05  
Name: Tod M. Woolf

BEFORE ME, the undersigned authority, on this 5 day of August, 2005, personally appeared Tod M. Woolf known to me to be the person whose name is subscribed to the foregoing instrument and acknowledge to me that he executed the same of his own free will for the purposes and consideration therein expressed.

[Signature]  
Notary or Consular Officer

[SEAL]