

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT6173283

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	OLIVIER NEGRE	06/16/2020
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	BLUEBIRD BIO, INC.	
<b>Street Address:</b>	60 BINNEY STREET	
<b>City:</b>	CAMBRIDGE	
<b>State/Country:</b>	MASSACHUSETTS	
<b>Postal Code:</b>	02142	
<b>PROPERTY NUMBERS Total: 1</b>		
	<b>Property Type</b>	<b>Number</b>
	Application Number:	16771411
<b>CORRESPONDENCE DATA</b>		
<b>Fax Number:</b>		
<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>	339-499-9300	
<b>Email:</b>	IPDOCKETING@BLUEBIRDBIO.COM	
<b>Correspondent Name:</b>	BLUEBIRD BIO, INC.	
<b>Address Line 1:</b>	60 BINNEY STREET	
<b>Address Line 4:</b>	CAMBRIDGE, MASSACHUSETTS 02142	
<b>ATTORNEY DOCKET NUMBER:</b>	BLUE-093.USPC	
<b>NAME OF SUBMITTER:</b>	ADAM JAMES GASTONGUAY	
<b>SIGNATURE:</b>	/ADAM JAMES GASTONGUAY/	
<b>DATE SIGNED:</b>	06/26/2020	
	This document serves as an Oath/Declaration (37 CFR 1.63).	
<b>Total Attachments: 4</b>		
source=BLUE-093.USPC [2020.06.18] Executed Combined Declaration & Assignment#page1.tif		
source=BLUE-093.USPC [2020.06.18] Executed Combined Declaration & Assignment#page2.tif		
source=BLUE-093.USPC [2020.06.18] Executed Combined Declaration & Assignment#page3.tif		
source=BLUE-093.USPC [2020.06.18] Executed Combined Declaration & Assignment#page4.tif		

**COMBINED DECLARATION AND ASSIGNMENT**

**Olivier NEGRE**, residing at 60 Binney Street, Cambridge, Massachusetts, 02142 (each referred to as “Assignor”) has made an invention(s) (the “Invention(s)”) set forth in an application for patent entitled **SICKLED BETA GLOBIN ANTIBODIES**, and which is a:

- ☒ non-provisional application
- (a) ☐ to be filed herewith; or
- (b) ☒ bearing Application No. **16/771,411**, and filed on **June 10, 2020**.

**WHEREAS**, bluebird bio, Inc., a corporation duly organized under and pursuant to the laws of Delaware, and having its principal place of business at 60 Binney Street, Cambridge, Massachusetts 02142, its successors, legal representatives and assigns, (the “Assignee”), is desirous of acquiring the entire right, title, and interest in: the Invention(s); the application(s) for patent identified above; the right to file applications for patent of the United States or other countries on the Invention(s); any application(s) for patent of the United States or other countries claiming priority to, and/or the benefit of, these applications; any provisional or other right to recover any and all past, present, and future damages, including royalties, for any and all past, present, and future infringements of these application(s); and any and all patent(s) of the United States or other countries that may be granted therefor or thereon.

**NOW, THEREFORE**, for good and sufficient consideration, the receipt of which is hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee or a predecessor in interest of the Assignee, or if the Assignor has already done so via a prior agreement with the Assignee or a predecessor in interest of the Assignee then in confirmation of any obligation to do so in said prior agreement, the Assignor has sold, assigned, transferred, and set over, and by these presents does sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns, the Assignor’s entire right, title, and interest in:

- (a) the Invention(s);
- (b) the application(s) for patent identified above;
- (c) the right to file applications for patent of the United States or other countries on the Invention(s), including all rights under the Hague Convention, the Paris Convention for the Protection of Industrial Property, and under the Patent Cooperation Treaty, and all rights of claiming priority in any country of the world;
- (d) any application(s) for patent of the United States or other countries claiming the Invention(s);

(e) any application(s) for patent of the United States or other countries claiming priority to, and/or the benefit of, at least one of the application(s) for patent identified above or any application(s) for patent claiming the Invention(s), including any priority application(s), substitute application(s), divisional(s), continuation(s), and continuation(s)-in-part;

(f) any provisional or other right to recover any and all past, present, and future damages, including royalties, for any and all past, present, and future infringements of any application for patent identified in the preceding paragraphs (b)-(e) and of any and all patent(s) granted based thereon in the United States and in all other countries; and

(g) any patent(s) of the United States or other countries that may be granted for or on any application for patent identified in the preceding paragraphs (b)-(e), including any reissue(s), reexamination(s), revival(s), renewal(s) and extension(s) of said patent(s).

The above-granted rights, titles, and interests are to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, as fully and entirely as the same would have been held and enjoyed by the Assignor had this sale and assignment not been made.

The Assignor hereby represents to the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, or if applicable, at such time said prior agreement was executed, the Assignor is a lawful owner of an undivided interest in the entire right, title, and interest in and to the Invention(s), that the Invention(s) are unencumbered, except, if applicable, by obligation to assign in accordance with said prior agreement, and that the Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth herein, and that Assignor will not make or enter into any assignment, sale, agreement or encumbrance which would conflict with these presents.

The Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives, and assigns, that the Assignor will sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done in connection with any and all proceedings for the procurement, maintenance, enforcement and defense of the Invention(s), said application(s), and said patent(s), including interference and derivation proceedings, and any post-grant proceedings (*e.g.*, opposition proceedings, post-grant reviews, *Inter partes* reviews, supplemental examinations, *etc.*) without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns.

The Assignor hereby requests the Commissioner of Patents to issue said patents of the United States to the Assignee for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

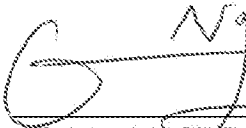
I hereby declare that the above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. I have reviewed and understand the contents of the above-identified application, including the claims.

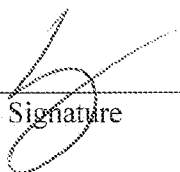
I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56.

I hereby 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.

Date: 16 JUNE 2020

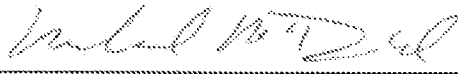
By:   
Olivier NEGRE

HELENE NEGRE  
Witness Printed Name

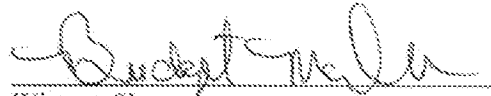
  
Witness Signature

For and on behalf of ASSIGNEE:

Date: 6/17/20

By:   
Michael McDonald  
Senior Director, Senior Intellectual  
Property Counsel  
bluebird bio, Inc.

Bridget McDonald  
Witness Printed Name

  
Witness Signature