UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BLUEBIRD BIO, INC.,

Petitioner,

v.

SLOAN KETTERING INSTITUTE FOR CANCER RESEARCH,

Patent Owner.

Case No. IPR2023-00070

Patent No. 7,541,179

DECLARATION OF DR. JAMES RILEY IN SUPPORT OF PATENT OWNER'S RESPONSE

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Table of Contents

I.	Quali	Qualifications					
II.	Relev	Relevant Field and Level of Ordinary Skill in the Art					
III.	Mater	Materials Reviewed					
IV.	The U	ne Understandings Applied to My Analysis 14					
V.	State	State of the Art					
	A.	Back	ground 20				
	B.	The f	B-globin gene was intensely studied 22				
		1.	While the LCR had been well-characterized, it was not				
			known which regions were needed to provide consistent high-level expression				
	C.	Meth	s for assembling expression vectors were known 27				
		1.	Restriction Endonucleases				
		2.	PCR				

	D.	Despite all that was known about the β -globin gene, gene therapy				
		vectors remained elusive				
VI.	Vect	or Development and Testing is Slow				
VII.	The	Claimed Lentiviral Vector Represented a Major Advancement				
	Tow	ards Genetic Treatment of Disorders such as Hemoglobinopathies 42				
VIII.	The	e '179 and '061 Patents 45				
	A.	The Disclosures of the '179 Patent 46				
	B.	The Priority Date of the '179 Patent 52				
	C.	Prosecution History				
IX.	The .	Asserted Art 64				
	A.	Summary of the Asserted Art				
		1. May Abstract				
		2. The Nature Article				
		3. The May Thesis 70				
	B.	Use of the Asserted Art				
		2				

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Х.	Clain	Claim Construction				
XI.	Petiti	Petitioner Fails to Show that (i) Each Limitation of the Claims is Disclosed				
	in the	in the Asserted Art or (ii) that the Clams Were Obvious in View of that				
	Art					
	A.	The N	Nature Article Does Not Anticipate Claims 1, 19, and 22 of the			
		' 179]	Patent			
		1.	A POSA would have understood that PCR could be used to			
			generate the disclosed HS fragments 77			
		2.	None of the HS fragments generated using restriction			
			enzymes are the sizes of the HS fragments disclosed in the			
			Nature Article			
XII.	The A	he Asserted Art Fails to Render the Challenged Claims Obvious 10				
		1.	The Nature Article Does Not Render the Claims Obvious 104			
		2.	The May Abstract Does Not Render the Challenged Claims			

I, James Riley, declare as follows:

1. I am over the age of 21 years and am fully competent to make this Declaration. I make the following statements based on personal knowledge and, if called to testify to them, could and would do so.

2. I understand these patents are being challenged in *inter partes* reviews in front of the Patent Trial and Appeal Board of the United States Patent and Trademark Office.

3. I understand that the validity of certain claims of U.S. Patent No. 7,541,179 ("the '179 Patent") and U.S. Patent No. 8,058,061 ("the '061 Patent") have been challenged in *inter partes review* (IPR) proceedings in front of the Patent Trial and Appeal Board of the United States Patent and Trademark Office. Specifically, in IPR2023-00070 the validity of claims 1, 10, 19, and 22 of the '179 Patent have been challenged, and in IPR2023-0074 the validity of claims 1, 2, 5-8, 11, and 15 of the '061 Patent have been challenged. I make this declaration in support of Patent Owner's Preliminary Response in the above-captioned *inter partes* review.

I. Qualifications

4. I received my B.S. from Vanderbilt University in Molecular Biology in 1989. I received my Ph.D. from Emory University in Genetics and Molecular Biology in 1994 under the supervision of Dr. Jeremy Boss. I did my postdoctoral

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