

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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BLUEBIRD BIO, INC.  
Petitioner

v.

SLOAN KETTERING INSTITUTE FOR CANCER RESEARCH,  
Patent Owner

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Patent No. 7,541,179

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**PETITIONER'S CURRENT LIST OF EXHIBITS**

**LIST OF EXHIBITS**

<b>Ex. No.</b>	<b>Description</b>	<b>Previously Submitted</b>
Ex.1001	U.S. Patent No. 7,541,179 to Sadelain <i>et al.</i> (“the ’179 patent”)	X
Ex.1002	Declaration of Jörg Bungert, Ph.D.	X
Ex.1003	Curriculum Vitae of Jörg Bungert, Ph.D.	X
Ex.1004	May, “Therapeutic Hemoglobin Synthesis in Beta-Thalassemic Mice Expressing Lentivirus-Encoded Beta-Globin,” Cornell University (2001) (“the <i>May Thesis</i> ”)	X
Ex.1005	May, <i>et al.</i> , “Therapeutic Haemoglobin Synthesis in $\beta$ -thalassaemic Mice Expressing Lentivirus-Encoded Human $\beta$ -globin,” <i>Nature</i> , 406:82-86 (2000) (“the <i>May Article</i> ”)	X
Ex.1006	May, <i>et al.</i> , “Lentiviral-Mediated Transfer of the Human $\beta$ -Globin Gene and Large Locus Control Region Elements Permit Sustained Production of Therapeutic Levels of $\beta$ -Globin in Long-Term Bone Marrow Chimeras,” <i>Mol. Therapy</i> , 1(5):S248-249 (2000) (“the <i>May Abstract</i> ”)	X
Ex.1007	Perutz, <i>et al.</i> , “Hemoglobin Structure and Respiratory Transport,” <i>Sci. Am.</i> , 239(6): 92-125 (1978)	X
Ex.1008	Thein & Rochette, “Disorders of Hemoglobin Structure and Synthesis,” <i>in Principles of Mol. Med.</i> 179 (Jameson, ed., 1998)	X
Ex.1009	Bank, <i>et. al.</i> , “Disorders of Human Hemoglobin,” <i>Science</i> , 207:486-93 (1980)	X
Ex.1010	He & Russell, “Expression, Purification, and Characterization of Human Hemoglobins Gower-I ( $\zeta_2\varepsilon_2$ ), Gower-2 ( $\alpha_2\varepsilon_2$ ), and Portland-2 ( $\zeta_2\beta_2$ ) Assembled in Complex Transgenic-Knockout Mice, <i>Blood</i> , 97(4):1099-1105 (2001)	X

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Ex.1011	Bunn, "Pathogenesis and Treatment of Sickle Cell Disease," N. Engl. J. Med., 337(11):762-69 (1997)	X
Ex.1012	Hardison, <i>et al.</i> , "Locus Control Regions of Mammalian $\beta$ -globin Gene Clusters: Combining Phylogenetic Analyses and Experimental Results to Gain Function Insights, Gene, 205:73-94 (1997)	X
Ex.1013	Civin, <i>et al.</i> , "Sustained, Retransplantable, Multilineage Engraftment of Highly Purified Adult Human Bone Marrow Stem Cells <i>In Vivo</i> ," Blood, 88(11):4102-09 (1996)	X
Ex.1014	High, "Gene Therapy in Haematology and Oncology," <i>Lancet</i> , 356:S8 (2000)	X
Ex.1015	Ellis, <i>et al.</i> , "Evaluation of $\beta$ -globin Gene Therapy Constructs in Single Copy Transgenic Mice," Nucleic Acids Res., 25(6):1296-1302 (1997)	X
Ex.1016	Li, <i>et al.</i> , "Nucleotide Sequence of 16-Kilobase Pairs of DNA 5' to the Human $\epsilon$ -Globin Gene," J. Biol. Chem., 260(28):14901-10 (1985)	X
Ex.1017	Mishima, <i>et al.</i> , "The DNA Deletion in an Indian $\delta\beta$ -thalassaemia Begins One Kilobase From the $\gamma$ Globin Gene and Ends in an L1 Repetitive Sequence," Br. J. Haematol., 73:375-79 (1989)	X
Ex.1018	Vosberg, "Molecular Cloning of DNA: An Introduction Into Techniques and Problems," Hum. Genet. 40(1):1-72 (1977)	X
Ex.1019	Roberts, "Restriction Enzymes and Their Isoschizomers," Nucleic Acids Res., 15(Suppl.):r189-r217 (1987)	X
Ex.1020	Zufferey, <i>et al.</i> , "Multiply Attenuated Lentiviral Vector Achieves Efficient Gene Delivery <i>in Vivo</i> ," Nature Biotech., 15:871-75 (1997)	X
Ex.1021	Miyoshi, <i>et al.</i> , "Transduction of Human CD34 <sup>+</sup> Cells that Mediate Long-Term Engraftment of NOD/SCID Mice by HIV Vectors," Science, 283:682-86 (1999)	X

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Ex.1022	Sadelain, <i>et al.</i> , “Generation of a High-titer Retroviral Vector Capable of Expressing High Levels of the Human $\beta$ -Globin Gene,” <i>Proc. Natl. Acad. Sci. USA</i> , 92:6728-32 (1995)	X
Ex.1023	Bouhassira, <i>et al.</i> , “Transcriptional Behavior of LCR Enhancer Elements Integrated at the Same Chromosomal Locus by Recombinase-Mediated Cassette Exchange,” <i>Blood</i> 90(9):3332-44 (1997)	X
Ex.1024	Fraser, <i>et al.</i> , “Each Hypersensitive Site of the Human $\beta$ -Globin Locus Control Regions Confers a Different Developmental Pattern of Expression on the Globin Genes,” <i>Genes Dev.</i> , 7:106-113 (1993)	X
Ex.1025	Engel, “Developmental Regulation of Human $\beta$ -Globin Gene Transcription: A Switch of Loyalties?,” <i>Trend. Genet.</i> , 9(9):304-09 (1993)	X
Ex.1026	Roberts & Macelis, “REBASE – Restriction Enzymes and Methylases,” <i>Nucleic Acids Res.</i> , 26(1):338-350 (1998)	X
Ex.1027	Roberts & Macelis, “REBASE – Restriction Enzymes and Methylases,” <i>Nucleic Acids Res.</i> , 27(1):312-13 (1999)	X
Ex.1028	Roberts & Macelis, “REBASE – Restriction Enzymes and Methylases,” <i>Nucleic Acids Res.</i> , 28(1):306-07 (2000)	X
Ex.1029	Roberts & Macelis, “REBASE – Restriction Enzymes and Methylases,” <i>Nucleic Acids Res.</i> , 29(1):268-69 (2001)	X
Ex.1030	Sequence Manipulation Suite (last visited October 11, 2022) (Website)	X
Ex.1031	Restriction Mapper, April 20, 2001 Wayback Machine Capture (last visited October 11, 2022) (Website)	X
Ex.1032	Prosecution History of the '179 patent (U.S. Patent Application No. 10/188,221)	X

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Ex.1033	Prosecution History of the '061 patent (U.S. Patent Application No. 12/433,412)	X
Ex.1034	U.S. Provisional Application 60/301,861 to Sadelain	X
Ex.1035	U.S. Provisional Application 60/302,852 to Sadelain	X
Ex.1036	Declaration by Ingrid Hsieh-Yee, Ph.D.	X
Ex.1037	SciMago, Nature (last visited October 11, 2022) (Website)	X
Ex.1038	SciMago, Molecular Therapy (last visited October 11, 2022) (Website)	X
Ex.1039	SciMago, Journal of Biological Chemistry (last visited October 11, 2022) (Website)	X
Ex.1040	Steele, "Editorial," Mol. Therapy, 1(5):S1 (2000)	X
Ex.1041	Glorioso, "Highlights from the Third Annual ASGT Meeting," Mol. Therapy, 2(2):96-100 (2000)	X
Ex.1042	"Author Index," Mol. Therapy, 1(5):S345-61 (2000)	X
Ex.1043	<i>San Rocco Therapeutics, LLC v. bluebird bio, Inc. et al.</i> , C.A. No. 21-1478-RGA, D.I. 75 (D. Del. July 26, 2022)	X
Ex.1044	<i>San Rocco Therapeutics, LLC v. bluebird bio, Inc. et al.</i> , C.A. No. 21-1478-RGA, D.I. 76 (D. Del. July 26, 2022)	X
Ex.1045	<i>San Rocco Therapeutics, LLC v. bluebird bio, Inc. et al.</i> , C.A. No. 21-1478-RGA, D.I. 78 (D. Del. July 28, 2022)	X
Ex.1046	Vidal, "Interim Procedures for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (June 21, 2022)	X
Ex.1047	Himanen, <i>et al.</i> , "A Recombinant Sickle Hemoglobin Triple Mutant With Independent Inhibitory Effects on Polymerization." J. Biol. Chem. 271(41):25152-56 (1996) ("Himanen")	X

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