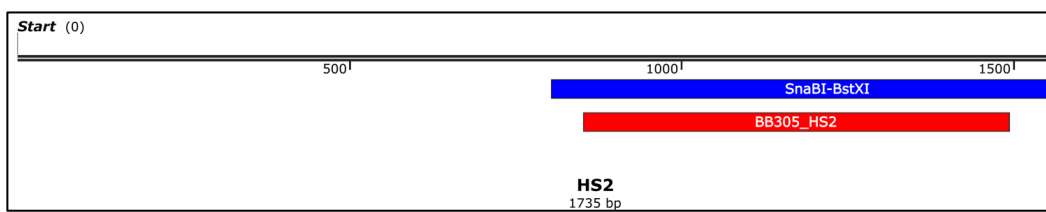


**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

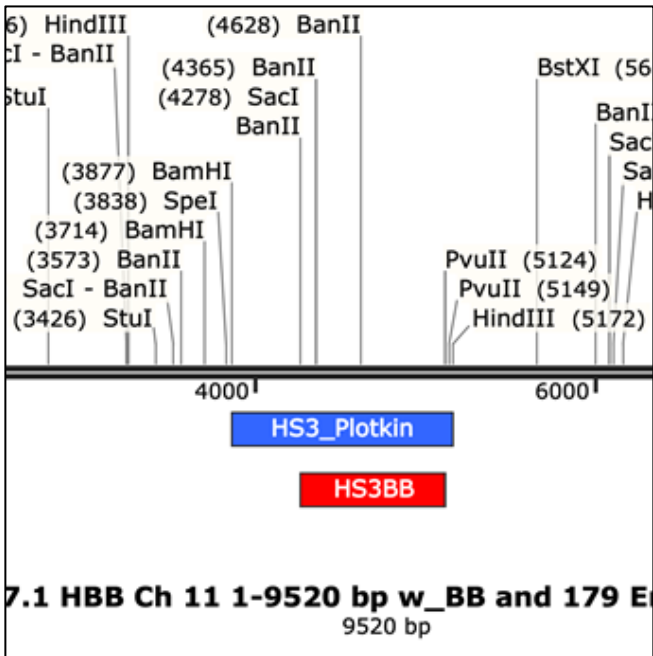
SAN ROCCO THERAPEUTICS, LLC,)
)
 Plaintiff,)
) C.A. No. 21-1478-RGA
 v.)
) **HIGHLY CONFIDENTIAL**
 BLUEBIRD BIO, INC. and THIRD ROCK)
 VENTURES, LLC,)
)
 Defendants.)

PLAINTIFF'S INITIAL INFRINGEMENT CLAIM CHARTS

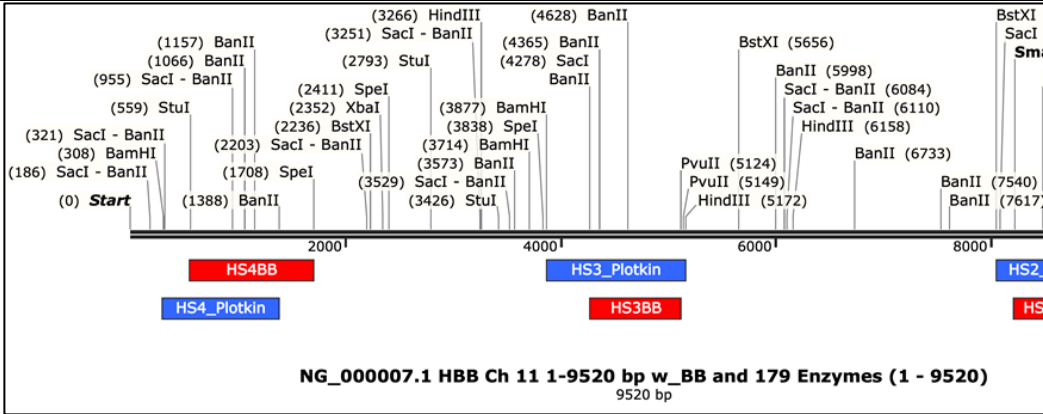
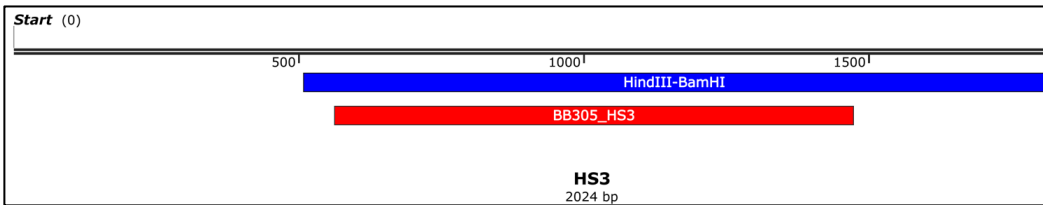
Appendix A – Initial Infringement Claim Chart For U.S. Patent No. 7,541,179 – HIGHLY CONFIDENTIAL

U.S. Patent No. 7,541,179		BB305
		<p>As the HS2 fragment is located between BstXI and SnaBI, the HS2 fragment is a BstXI-SnaBI spanning nucleotide fragment of said LCR.</p> <p>Bluebird’s limited production also supports this element. <i>See</i> BBI-DEL-00000034. For example, bluebird’s HS2 sequence identified in versus the SnaBI-BstXI fragment is shown below:</p>  <p>BB305_HS2 obtained from BBI-DEL-0000023-28 and compared to SnaBI-BstXI</p>
1.5	[the three fragments being...] [(2)] a BamHI and HindIII HS3-spanning nucleotide fragment of said LCR, and	<p>The BB305 vector comprises the 3.2-kb fragment discussed above (<i>see</i> claim 1.2 <i>supra</i>). The 3.2-kb fragment consists essentially of three contiguous nucleotide fragments obtained from the human β-globin locus control region (LCR), wherein the HS3 fragment (<i>see</i> claim 1.3 <i>supra</i>) is a BamHI and HindIII HS3-spanning nucleotide fragment of said LCR.</p> <p>To the extent the HS3 in BB305 is not literally a BamHI and HindIII HS3-spanning nucleotide fragment of said LCR, it is present under the doctrine of equivalents. For example, the HS3 in BB305 is substantially different from a BamHI and HindIII HS3-spanning nucleotide fragment of said LCR, but the HS3 fragment is a HS3 fragment and sufficiently sized to cause expression of the globin gene payload but not large enough to disrupt functioning of the vector. Alternatively, the HS3 in BB305 performs substantially the same function, in substantially the same way, to achieve the same result as a BamHI and HindIII HS3-spanning nucleotide fragment of said LCR. For example, the HS3 in BB305 and the BamHI and HindIII HS3-spanning nucleotide fragment of said LCR both cause expression of the globin gene payload. It performs that function in substantially the same way as a BamHI and HindIII HS3-spanning nucleotide fragment of said LCR (i.e., through the use of part of a human-derived β-globin locus control region known to naturally controls β-globin expression). The HS3 in BB305 is sufficiently large to cause expression of the globin gene payload but sufficiently small to fit the recombinant vector. This achieves the same result as a BamHI and HindIII HS3-spanning nucleotide fragment of said LCR.</p>

Appendix A – Initial Infringement Claim Chart For U.S. Patent No. 7,541,179 – HIGHLY CONFIDENTIAL

U.S. Patent No. 7,541,179	BB305
	<p>controlled expression of a replacement β-globin gene in the target cell. Notably, approximately two-thirds the size of the full BamHI and HindIII region.</p> <p><u>Exemplary Support:</u></p> <p>The HS3 fragment in BB305 (denoted “HS3BB”) is a subset of the HS3 human β-globin locus control region (LCR) located between the restriction sites BamHI (3877) and HindIII (5172).</p>  <p>7.1 HBB Ch 11 1-9520 bp w_BB and 179 E 9520 bp</p>

Appendix A – Initial Infringement Claim Chart For U.S. Patent No. 7,541,179 – HIGHLY CONDENSED

U.S. Patent No. 7,541,179	BB305
	 <p>As the HS3 fragment is located between BamHI and HindIII, the HS3 fragment is a HS3-spanning nucleotide fragment of said LCR.</p> <p>Bluebird’s limited production also supports this element. <i>See</i> BBI-DEL-00000034. For example, bluebird’s HS3 sequence identified in versus the HindIII-BamHI fragment is shown below:</p>  <p>BB305_HS3 obtained from BBI-DEL-0000023-28 and compared to HindIII-BamHI HS3.</p>
1.6	<p>[the three fragments being...] [(3)] a BamHI and BanII HS4-spanning</p> <p>The BB305 vector comprises the 3.2-kb fragment discussed above (<i>see</i> claim 1.2). The 3.2-kb fragment consists essentially of three contiguous nucleotide fragments obtained from the human globin locus control region (LCR), wherein the HS4 fragment (<i>see</i> claim 1.3) is a BamHI and BanII HS4-spanning nucleotide fragment of said LCR.</p>

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on August 10, 2023, a copy of the foregoing document was served, by email, on the counsel listed below:

Jack B. Blumenfeld
Jeremy A. Tigan
MORRIS, NICHOLS, ARSHT
& TUNNELL LLP
1201 North Market Street
P.O. Box 1347
Wilmington, DE 19899
(302) 658-9200
jblumenfeld@morrisnichols.com
jtigan@morrisnichols.com

*Attorneys for bluebird bio, Inc. and
Third Rock Ventures, LLC*

Eric W. Dittmann
Max H. Yusem
Joshua M. Bennett
Krystina L. Ho, Ph.D.
Naveen Modi
PAUL HASTINGS LLP
200 Park Avenue
New York, NY 10166
ericdittmann@paulhastings.com
maxyusem@paulhastings.com
joshuabennett@paulhastings.com
krystinaho@paulhastings.com
naveenmodi@paulhastings.com

*Attorneys for bluebird bio, Inc. and
Third Rock Ventures, LLC*

YOUNG CONAWAY STARGATT
& TAYLOR, LLP

/s/ Anne Shea Gaza

Anne Shea Gaza (No. 4093)
Samantha G. Wilson (No. 5816)
Rodney Square
1000 North King Street
Wilmington, DE 19801
(302) 571-6600
agaza@ycst.com
swilson@ycst.com

*Attorneys for Plaintiff
San Rocco Therapeutics, LLC*