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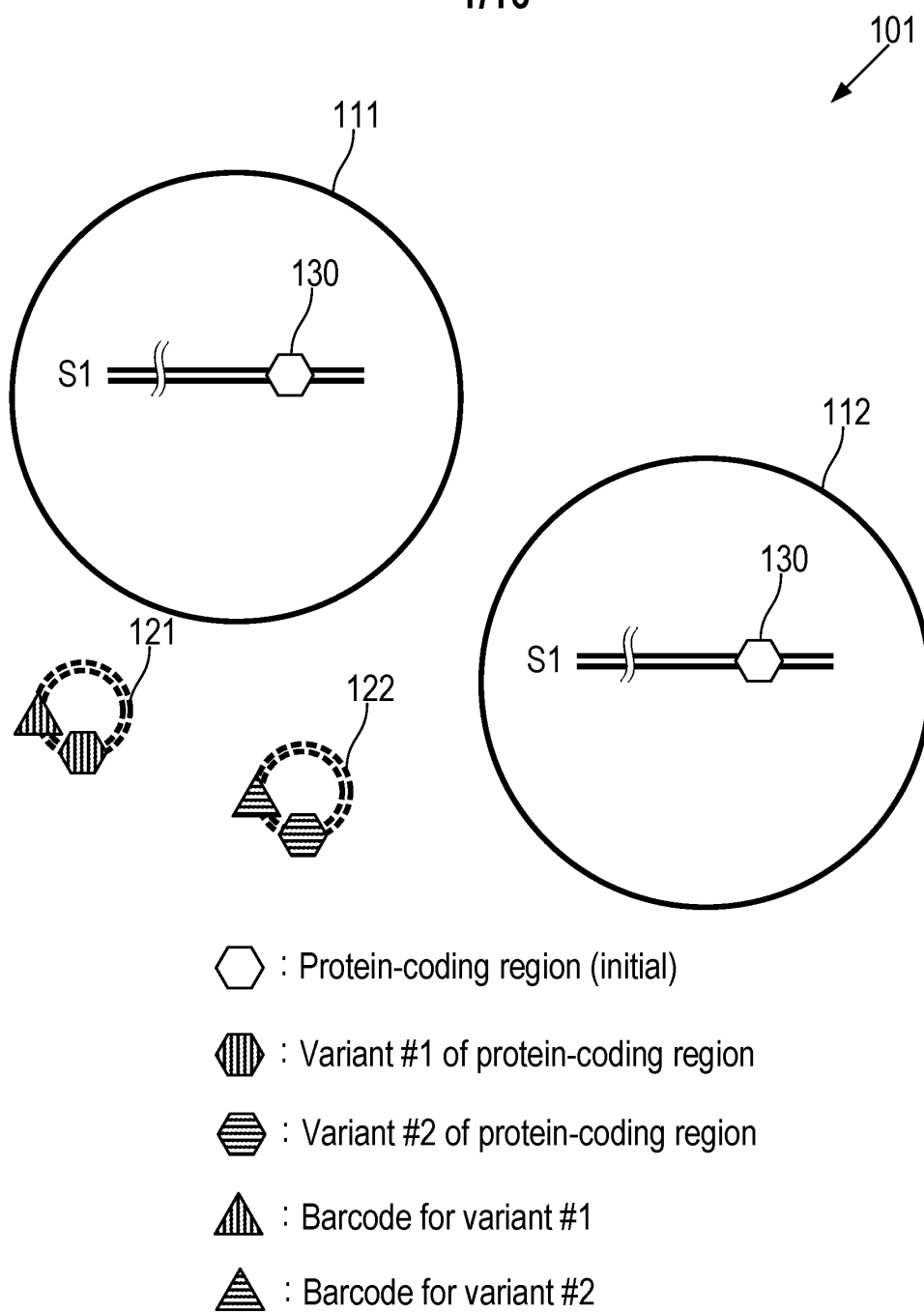
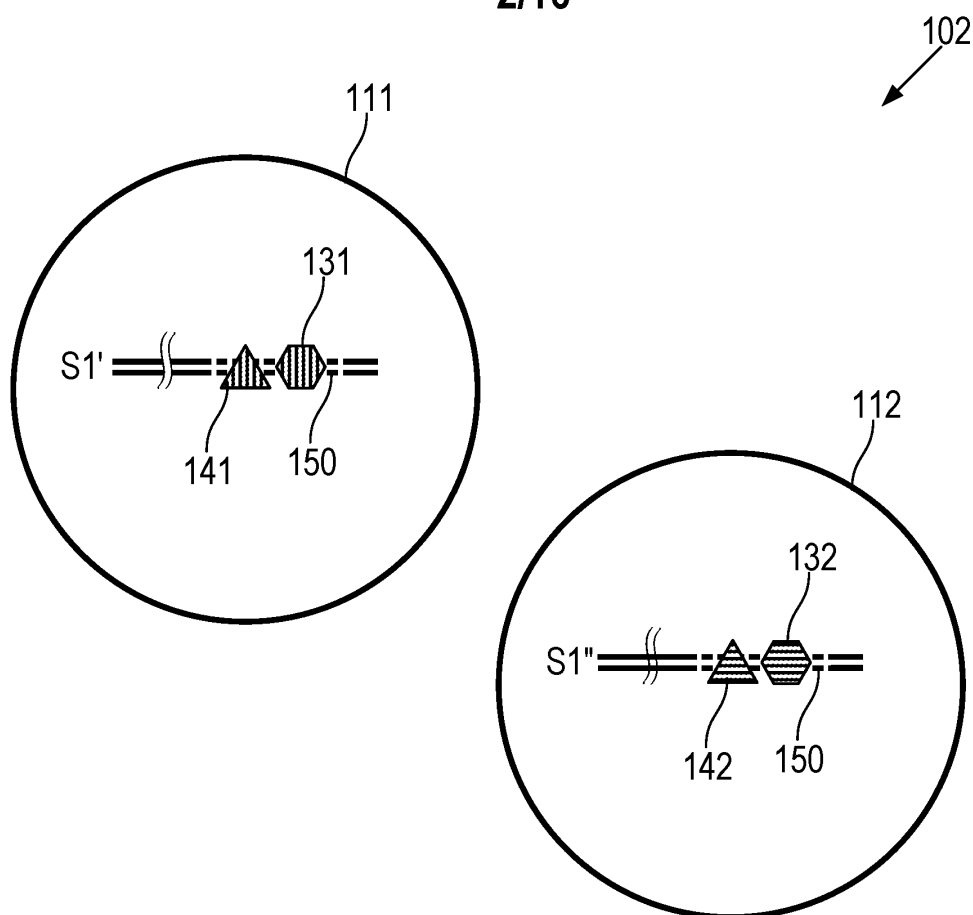


FIG. 1A

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▨ : Variant #1 of protein-coding region

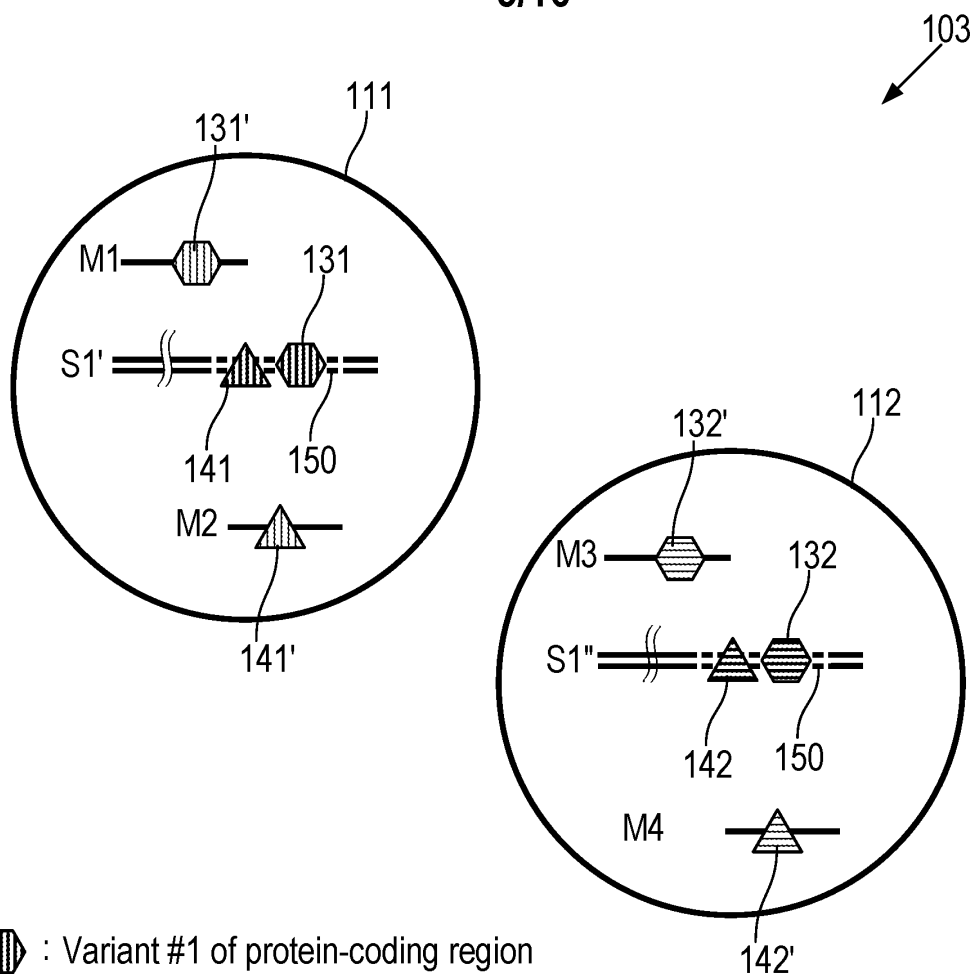
▩ : Variant #2 of protein-coding region

▧ : Barcode for variant #1

▦ : Barcode for variant #2

FIG. 1B

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▨ : Variant #1 of protein-coding region

▩ : Variant #2 of protein-coding region

▨ : Expressed variant #1 of protein-coding region

▩ : Expressed variant #2 of protein-coding region

▨ : Barcode for variant #1

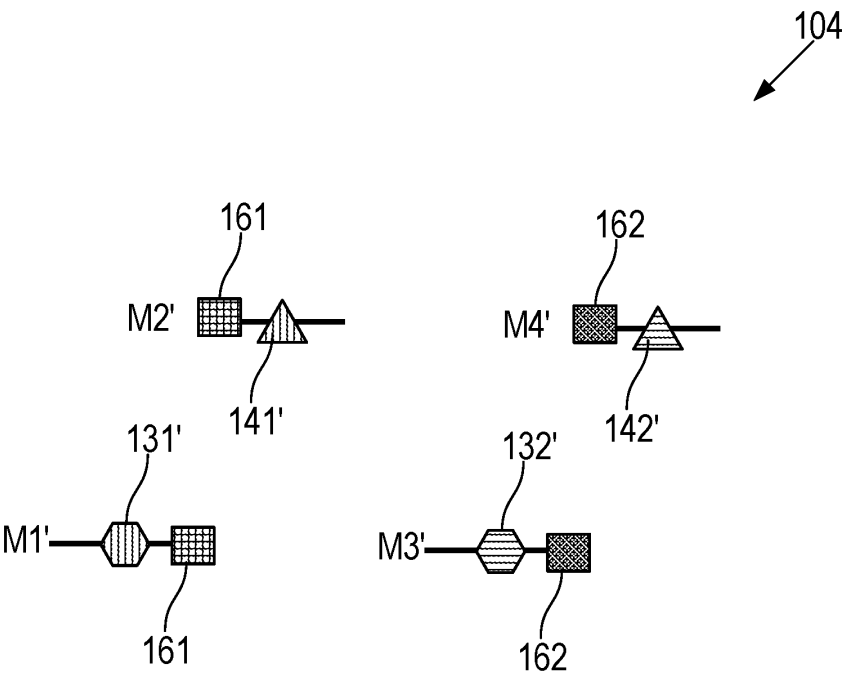
▨ : Expressed barcode for variant #1

▩ : Barcode for variant #2

▩ : Expressed barcode for variant #2

FIG. 1C

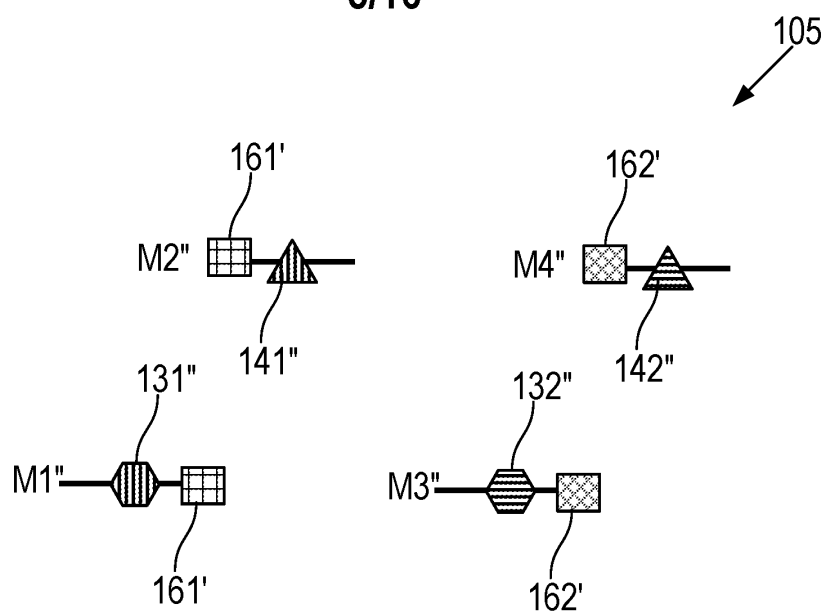
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-  : Expressed variant #1 of protein-coding region
-  : Expressed variant #2 of protein-coding region
-  : Expressed barcode for variant #1
-  : Expressed barcode for variant #2
-  : Barcode for cell 111
-  : Barcode for cell 112

FIG. 1D

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 : cDNA of variant #1 of protein-coding region

 : cDNA of variant #2 of protein-coding region

 : cDNA of barcode for variant #1

 : cDNA of barcode for variant #2

 : cDNA of barcode for cell 111

 : cDNA of barcode for cell 112

FIG. 1E

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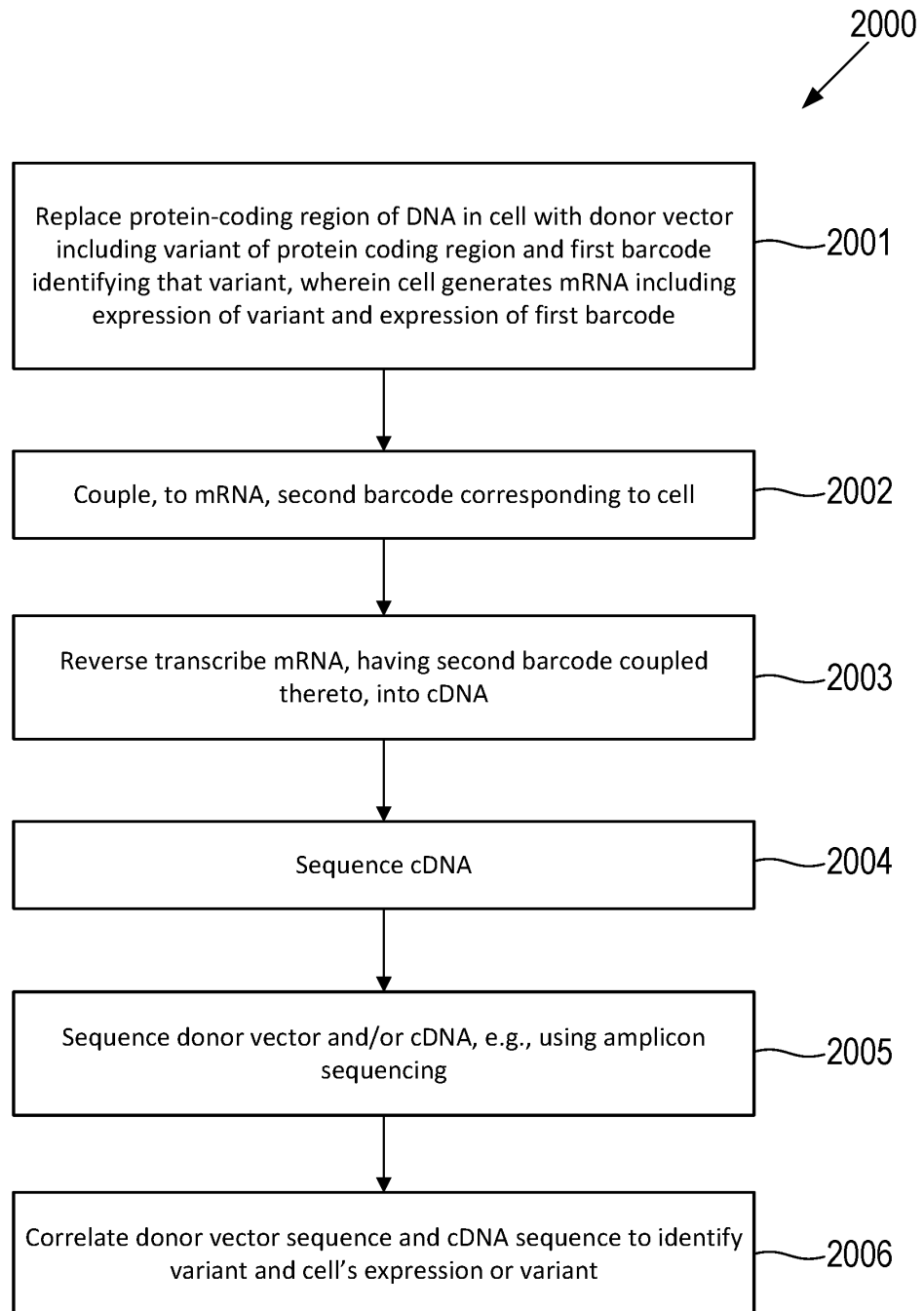


FIG. 2

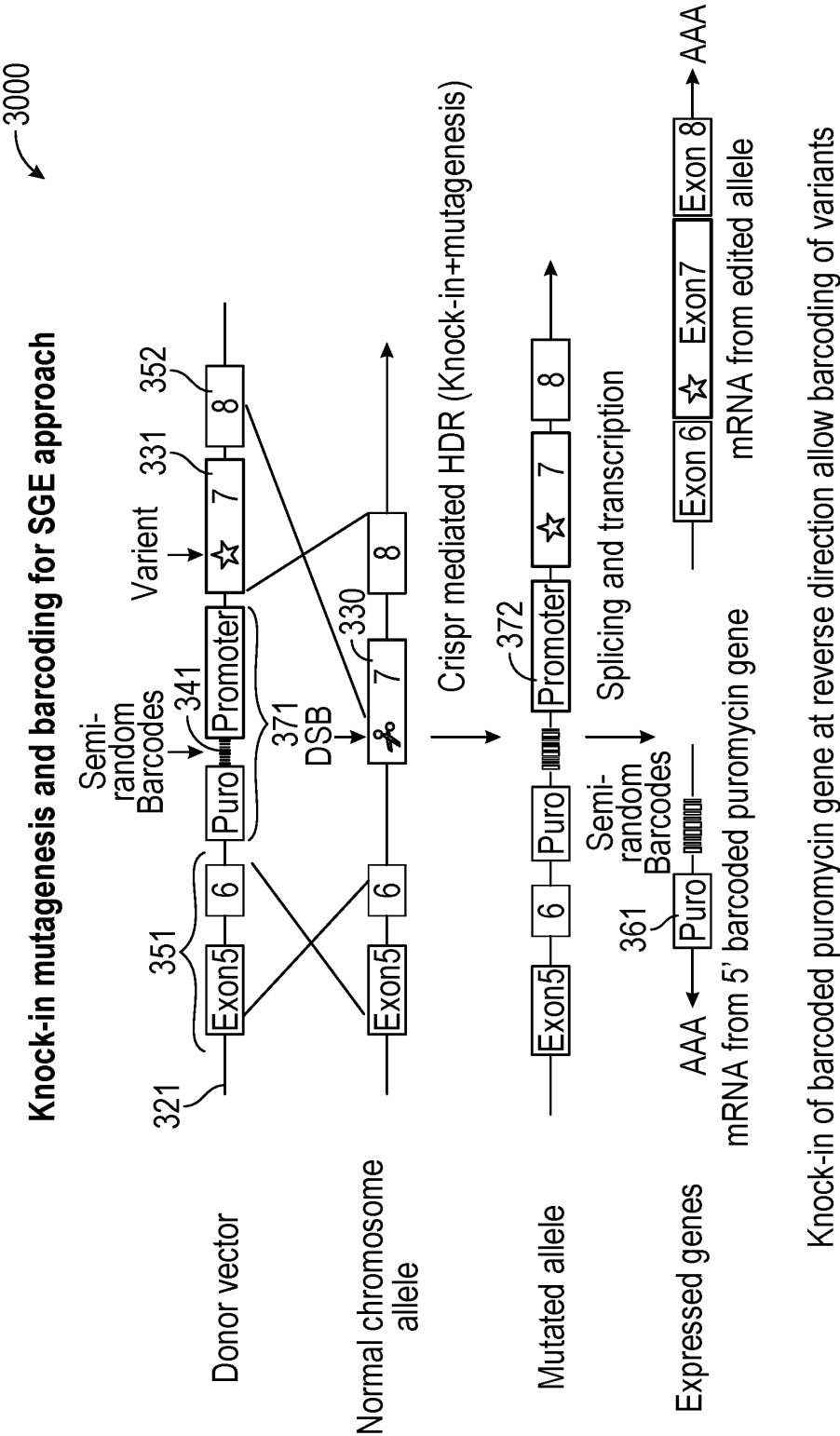
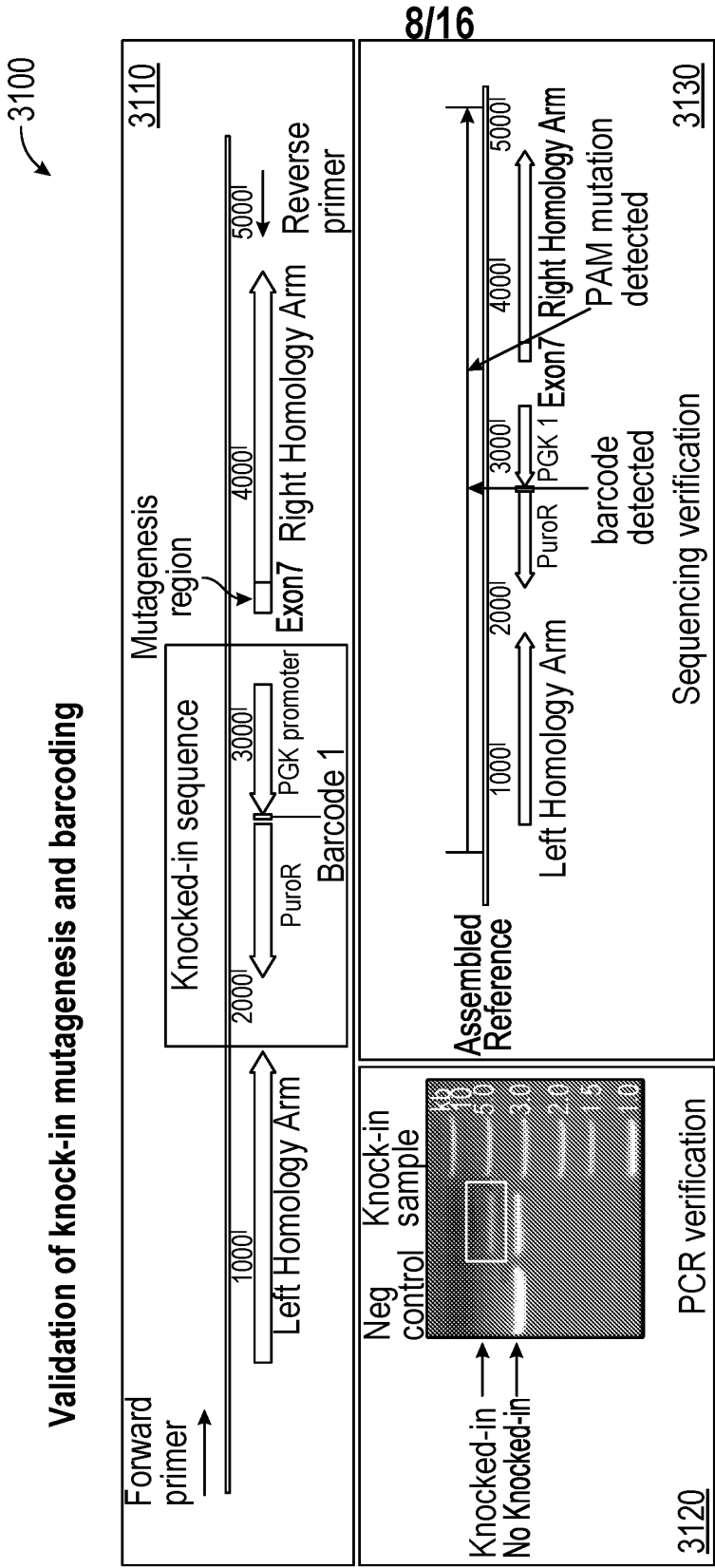


FIG. 3A



Conclusion: Knock-in mutagenesis and barcoding using CRISPR-mediated HDR approach is successfully established

FIG. 3B

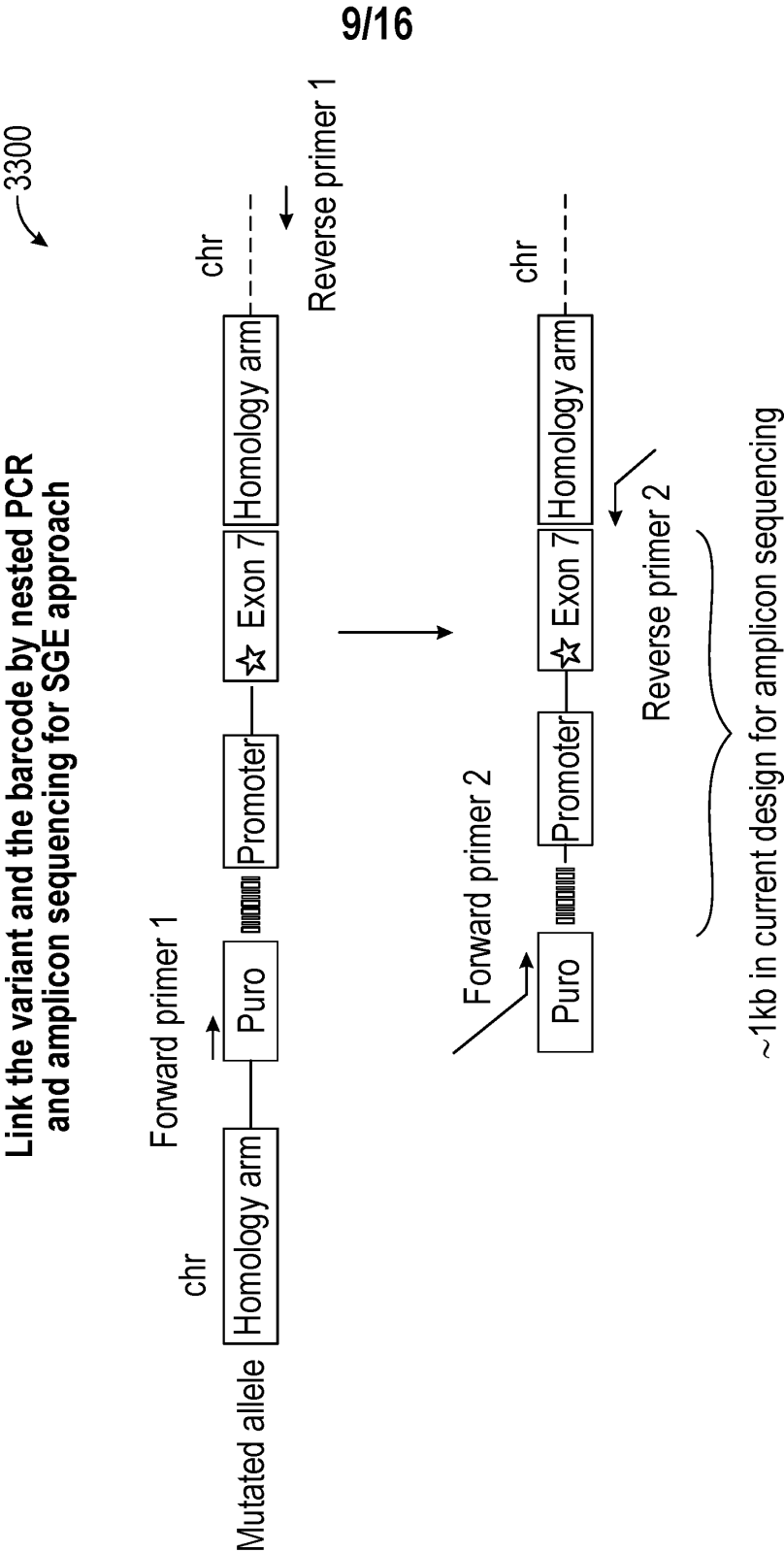


FIG. 3C

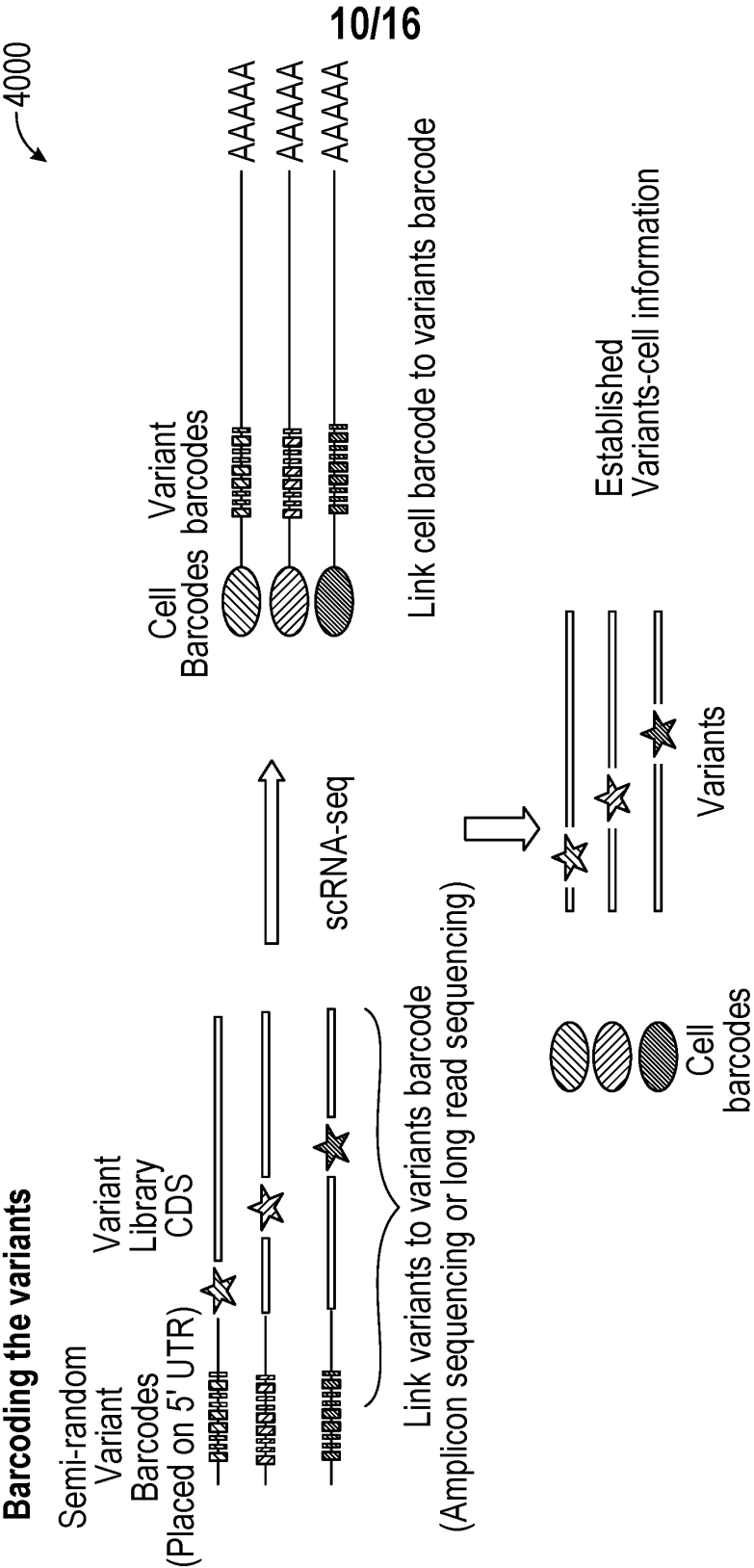


FIG. 4A

4100

Lentiviral vector constructed for 5' barcoding

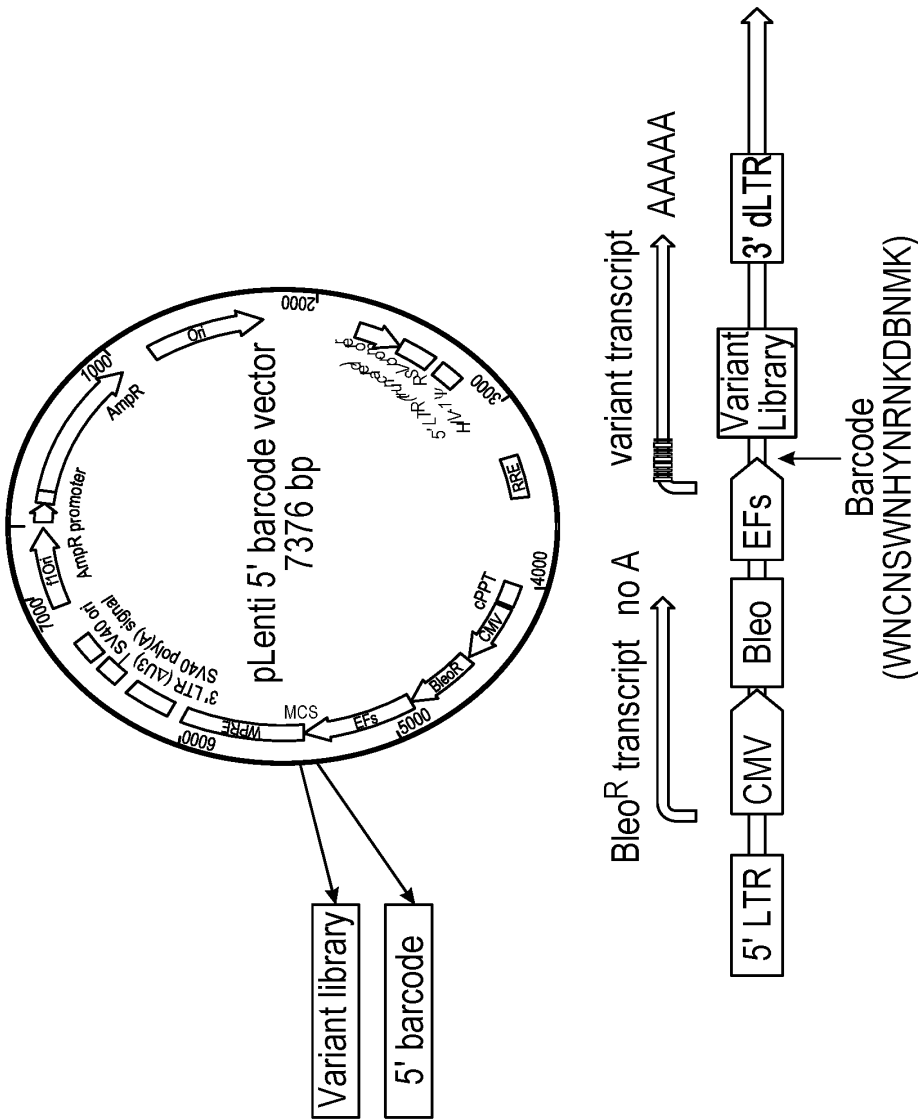


FIG. 4B

4300

Amplicon sequencing to link barcodes with variants with 5' barcoded vector

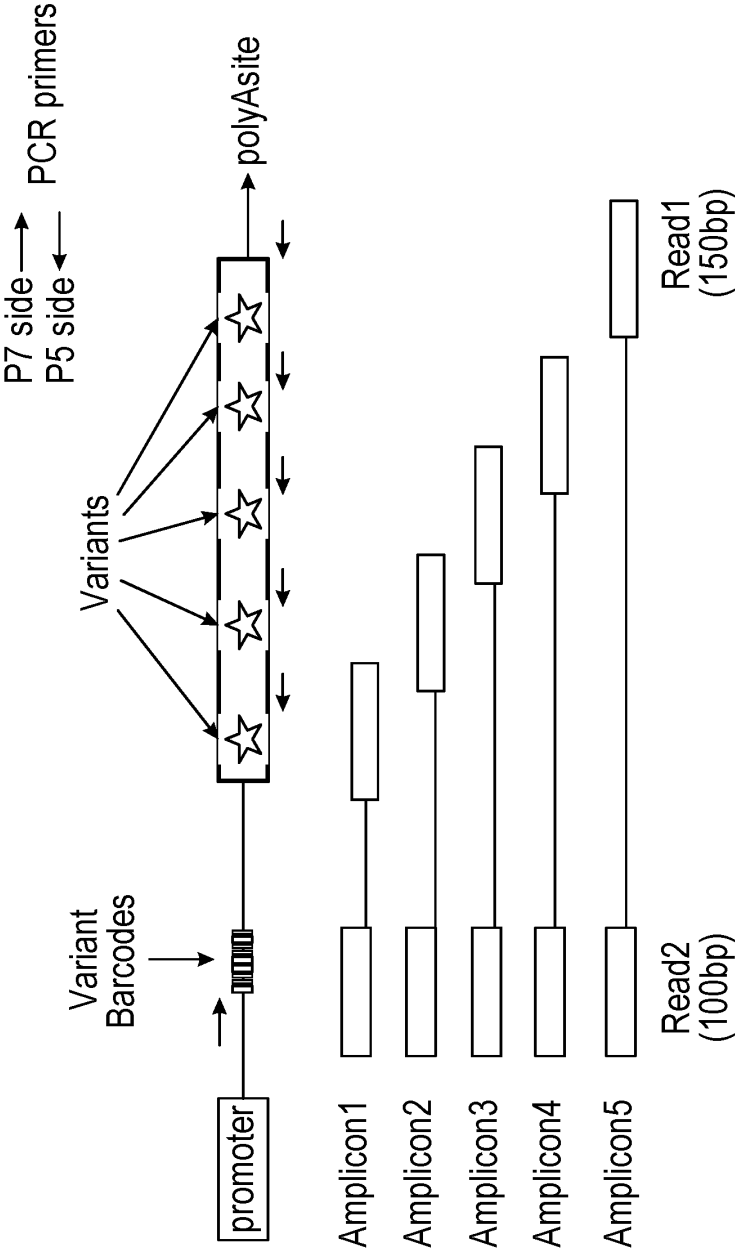


FIG. 4C

Variants can be linked barcodes by amplicon sequencing

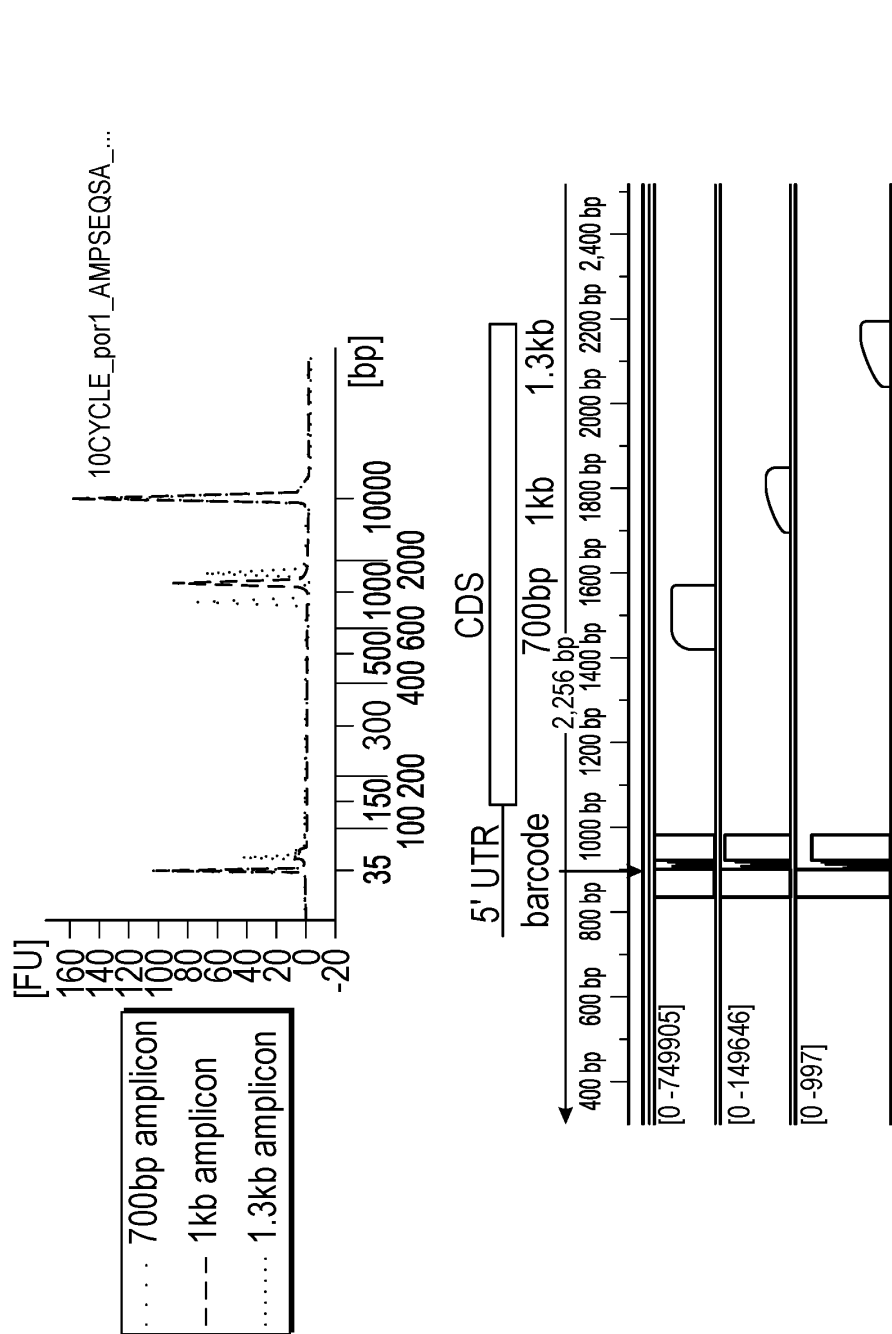


FIG. 4D



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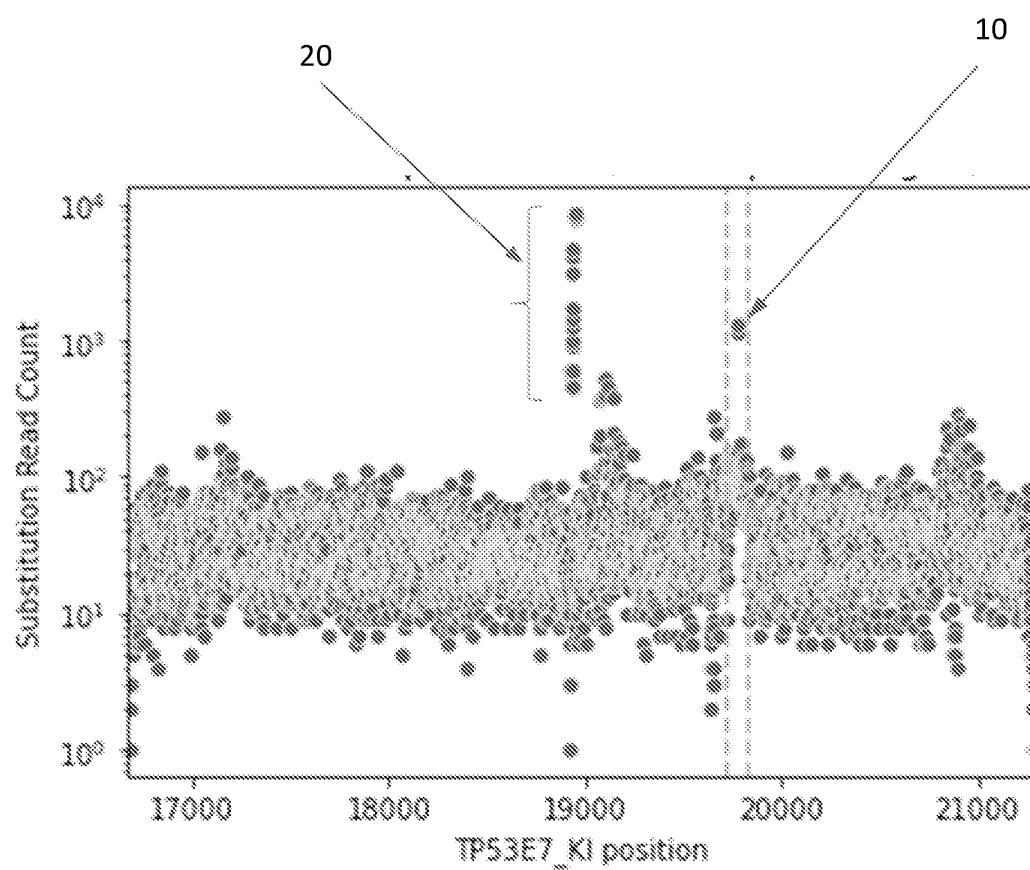


FIG. 5

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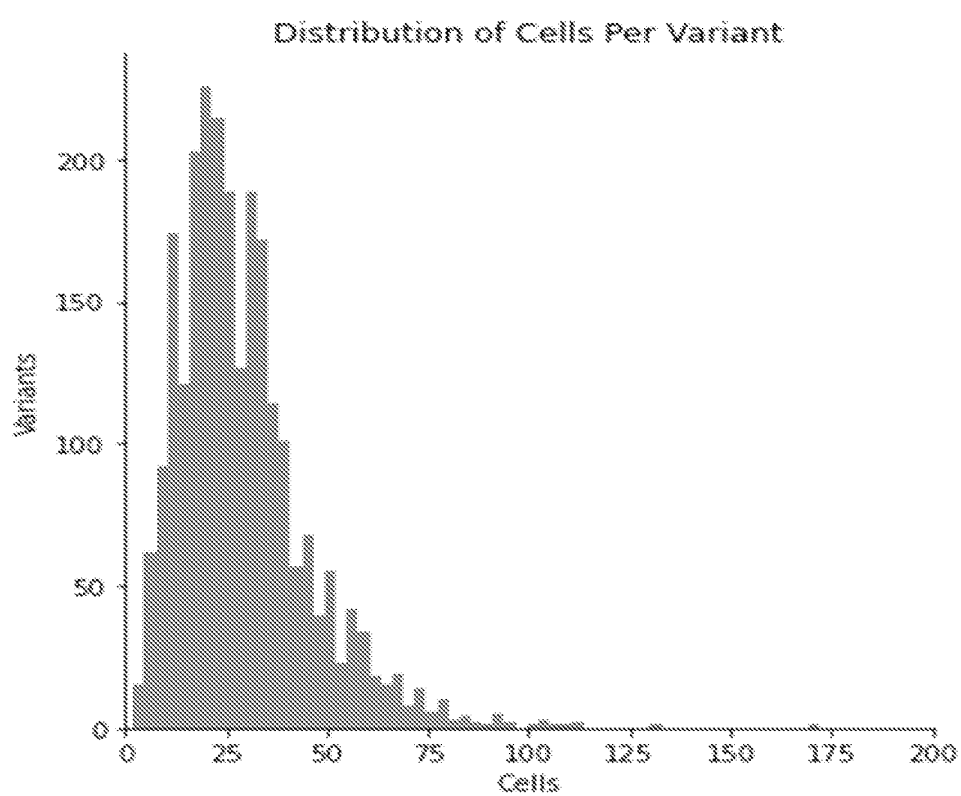


FIG. 6