Combining two Genetic Sexing Strains allows sorting of non-transgenic males for *Aedes* genetic control

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Supplementary Data 4: Plasmid and genomic integration nucleotide sequences

1. pX4 plasmid used for CRISPR/Cas9 knock-in of a Pub-GFP cassette into exon 6 of the *Aedes aegypti* M-linked gene AAEL019619 (Addgene #183903)

2. Nucleotide sequence of three gRNA expression cassettes, each under the control of a different *Aedes aegypti* U6 promoter, used to knock-in the pX4 GFP cassette in the *Ae. aegypti* M locus (Addgene #183912, #183913, #183914)

3. pX3 plasmid used for CRISPR/Cas9 knock-in into the *Aedes aegypti* m-linked gene AAEL019619 (Addgene #183904)

4. ppBAalbNixE1E3E4 PUb-YFP plasmid that produced M-linked *piggyBac* insertion Aalb-M on *Aedes albopictus* chromosome 1 (Addgene #173666)

5. *piggyBac* plasmid containing *Cas9* under control of the *Exuperentia* promoter, used to obtain the m-linked m-albR9 *Ae. albopictus* line (Addgene #183905)

6. pENTRPUb-OptpBTransposase helper plasmid expressing a hyper-active, codon-optimized and NLS-modified piggyBac transposase under the control of the Ae. aegypti Polyubiquitin promoter

7. pattBPUb-GFP, attB site-containg plasmid expressing *GFP* under control of the *Ae. aegypti* PUb promoter, inserted in the m-linked attP site of *Ae. albopictus* strain mX1 derived from m-albR9 (Addgene #183911)

8. Helper plasmid (*piggyBac* construct) used to express PhiC31 integrase under control of the PUb promoter (Addgene #183966)

9. Genomic sequence flanking the Aal-M insertion on the 3' piggyBac side.

10. Genomic sequence flanking the Aal-m insertion on the 3' piggyBac side.

1. pX4 plasmid used for CRISPR/Cas9 knock-in of a Pub-GFP cassette into exon 6 of the Aedes aegypti M-linked gene AAEL019619

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misc_feature 1922..2637
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misc_feature 1739..1920
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variation 4464..4464
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exon 4054..4137
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mRNA 4054..4137
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1801 ATCCGACTTT ATTGATTACG TTGTTAAGAG AACAAATCTT TTACAACTGA ATTCATTTGT
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1981 GGACCATGTG ATCGCGCTTC TCGTTGGGGT CTTTGCTCAG GGCGGACTGG GTGCTCAGGT
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2881 GACTTTGAAC TACGTAGTTT GGAAATTGCG TATCTTCAAG TTTTCACGAT TTCCTCAAGG
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6721 AAAAACGCCA GCAACGCGGC CTTTTTACGG TTCCTGGCCT TTTGCTGGCC TTTTGCTCAC
6781 ATGTT
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2. Nucleotide sequence of three gRNA expression cassettes, each under the control of a different *Aedes aegypti* U6 promoter, used to knock-in the pX4 GFP cassette in the *Ae. aegypti* M locus

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LOCUS       Plasmid1243              632 bp ds-DNA     linear SYN 13-OCT-2021
DEFINITION  synthetic DNA fragment
ORGANISM  synthetic DNA construct
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     misc_feature    482..504

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DEFINITION  synthetic DNA fragment
SOURCE      synthetic DNA construct
  ORGANISM  synthetic DNA construct
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LOCUS       Plasmid1245               530 bp ds-DNA     linear SYN 13-OCT-2021
DEFINITION  synthetic DNA fragment
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SOURCE synthetic DNA construct
ORGANISM synthetic DNA construct
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3. pX3 plasmid used for CRISPR/Cas9 knock-in into the Aedes aegypti m-linked gene AAEL019619

LOCUS pX3 6628 bp ds-DNA circular SYN 20-NOV-2019
DEFINITION synthetic circular DNA
FEATURES Location/Qualifiers
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terminator 387..473
/gene="Escherichia coli rrnB"
/label=rrnB T1 terminator
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misc_feature 774..1707
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CDS complement(1890..2609)
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SOURCE      synthetic DNA construct
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REFERENCE   1  (bases 1 to 8956)
  AUTHORS   .
  TITLE     Direct Submission
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5. piggyBac plasmid containing *Cas9* under control of the *Exuperentia* promoter, used to obtain the m-linked m-albR9 *Ae. albopictus* line

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DEFINITION synthetic circular DNA
SOURCE synthetic DNA construct
FEATURES Location/Qualifiers
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CDS complement(798..1607)
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Type II CRISPR/Cas system, mutated to improve targeting
specificity (Slaymaker et al., 2016)"
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6. pENTRPUb-OptpBTransposase helper plasmid expressing a hyper-active, codon-optimized and NLS-modified piggyBac transposase under the control of the *Ae. aegypti* Polyubiquitin promoter

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TITLE Direct Submission
JOURNAL Exported Wednesday, Feb 3, 2021 from SnapGene 5.2.4
https://www.snapgene.com
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7. pattBPUb-GFP, attB site-containg plasmid expressing *GFP* under control of the *Ae. aegypti* Pub promoter, inserted in the m-linked attP site of *Ae. albopictus* strain mX1 derived from m-albR9

```
LOCUS       attBPUbGFP              4729 bp ds-DNA     circular SYN 19-OCT-2020
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8. Helper plasmid (piggyBac construct) used to express PhiC31 integrase under control of the PUb promoter

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LOCUS       pB PUb-phiC31integrase              7924 bp ds-DNA     circular SYN 07-OCT-2021
DEFINITION  synthetic circular DNA.
ACCESSION   .
VERSION     .
KEYWORDS    .
SOURCE      synthetic DNA construct
  ORGANISM  synthetic DNA construct
REFERENCE   1  (bases 1 to 7924)
  AUTHORS   Li
  TITLE     Direct Submission
  JOURNAL   Exported Thursday, Oct 7, 2021 from SnapGene 5.2.5
            https://www.snapgene.com
FEATURES             Location/Qualifiers
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661 aaaaaggcat tcgcacatct ttctctgtat gccatataca cgaatggtag gtacattgac
721 gtctttgcca gaagttgaac tgcatcgttc aaggtacaga atgaacgact aacagacaca
781 agcacgtttt gctgtccatt cagacacagg gatggtaccc atagtcgatc gatttagagc
841 catccaaccg aacagaggta tatgtatgaa tggattgcag aaattttcta gaagtacaac
901 caccactacg gcagtgtcta taaaacgccc ctgcaaaggc aaaaccagct caatcgaata
961 cgtttcctag tggagtgaac attacgcggt ccaagtaagc agtgccagtg caagtgaagt
1021 gaagtctcta gtgaaaaaga gtgatccaat tagccagagg agaaaatttc agagtgaaca
1081 aagctttgtt caaaggacaa ttactattaa atttgtgaaa gtgcatttcg gtgaagggaa
1141 tcttctagtg aaggtaggta aattaaatga tgaaattata gctatgagcg aaaactagtt
1201 tggtgaatga ttcctttgtc tttgaatgag caaactattt tccaagatgg cgactattga
1261 gctttgagtg attagtgaaa atttgcaacg cagtttcatc atcattgata aaacccaatt
1321 gtgattcacg gcgataatca tatttcgttg aatcatcgct gctaattgaa ttaaatttct
1381 agagcaagcg cgaattcgcc atatttctaa aattaaatat tgtggtgata attacccatt
1441 aaggtaatat taacacatat cgagaaaaac cttgaggaaa tcgtgaaaac ttgaagatac
1501 gcaatttcca aactacgtag ttcaaagtcg aaaacaagtt aatttttcac taaaaagtag
1561 ggcgttgttg tgacgtcatc accttcaagt gtatattttt cacttggcct gcgactgcaa
1621 acgcagacaa agcaaaacaa gtttaaaacc tgtcgtgtcg tgctcgaagc caaaggcaat
1681 gaatcaatat caaatgagag tttgcatttc acaaccaatt actgaagcgt ttcctcgttt

1741 ctttttctgc tcaacagaga tttcaacaat gagcggccct ccaaaaaaga agagaaaggt
1801 agaagacccg ggcggcgaca cgtacgcggg tgcttacgac cgtcagtcgc gcgagcgcga
1861 aaattcgagc gcagcaagcc cagcgacaca gcgtagcgcc aacgaagaca aggcggccga
1921 ccttcagcgc gaagtcgagc gcgacggggg ccggttcagg ttcgtcgggc atttcagcga
1981 agcgccgggc acgtcggcgt tcgggacggc ggagcgcccg gagttcgaac gcatcctgaa
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2161 tgtttccact caggaaggcg tcttccggca gggaaacgtc atggacctga ttcacctgat
2221 tatgcggctc gacgcgtcgc acaaagaatc ttcgctgaag tcggcgaaga ttctcgacac
2281 gaagaacctt cagcgcgaat tgggcgggta cgtcggcggg aaggcgcctt acggcttcga
2341 gcttgtttcg gagacgaagg agatcacgcg caacggccga atggtcaatg tcgtcatcaa
2401 caagcttgcg cactcgacca ctccccttac cggacccttc gagttcgagc ccgacgtaat
2461 ccggtggtgg tggcgtgaga tcaagacgca caaacacctt cccttcaagc cgggcagtca
2521 agccgccatt cacccgggca gcatcacggg gctttgtaag cgcatggacg ctgacgccgt
2581 gccgacccgg ggcgagacga ttgggaagaa gaccgcttca agcgcctggg acccggcaac
2641 cgttatgcga atccttcggg acccgcgtat tgcgggcttc gccgctgagg tgatctacaa
2701 gaagaagccg gacggcacgc cgaccacgaa gattgagggt taccgcattc agcgcgaccc
2761 gatcacgctc cggccggtcg agcttgattg cggaccgatc atcgagcccg ctgagtggta
2821 tgagcttcag gcgtggttgg acggcagggg gcgcggcaag gggctttccc gggggcaagc
2881 cattctgtcc gccatggaca agctgtactg cgagtgtggc gccgtcatga cttcgaagcg
2941 cggggaagaa tcgatcaagg actcttaccg ctgccgtcgc cggaaggtgg tcgacccgtc
3001 cgcacctggg cagcacgaag gcacgtgcaa cgtcagcatg gcggcactcg acaagttcgt
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3241 agaccgcgcg gcaggcgcgt acgacggacc cgttggcagg aagcacttcc ggaagcaaca
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3361 cgaagccccg aagcttcccc ttgaccaatg gttccccgaa gacgccgacg ctgacccgac
3421 cggccctaag tcgtggtggg ggcgcgcgtc agtagacgac aagcgcgtgt tcgtcgggct
3481 cttcgtagac aagatcgttg tcacgaagtc gactacgggc agggggcagg gaacgcccat
3541 cgagaagcgc gcttcgatca cgtgggcgaa gccgccgacc gacgacgacg aagacgacgc
3601 ccaggacggc acggaagacg tagcggcgta gtaagcataa tcagccatac cacatttgta
3661 gaggttttac ttgctttaaa aaacctccca cacctccccc tgaacctgaa acataaaatg
3721 aatgcaattg ttgttgttaa cttgtttatt gcagcttata atggttacaa ataaagcaat
3781 agcatcacaa atttcacaaa taaagcattt ttcttcactg cattctagtt gtggtttgtc
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3961 gagttatcta attcaattag agactaattc aattagagtc taattcaatt agagttatct
4021 aattcaatta gagactaatt caattagagt ctaattcaat tagagttatc taattcaatt
4081 agagactaat tcaattagag tctaattcaa ttagagttat ctaattcaat tagagactaa
4141 ttcaattaga gctaattcaa ttaggatcca agcttatcga tttcgaaccc tcgaccgccg
4201 gagtataaat agaggcgctt cgtctacgga gcgacaattc aattcaaaca agcaaagtga
4261 acacgtcgct aagcgaaagc taagcaaata aacaagcgca gctgaacaag ctaaacaatc
4321 ggggtaccgc tagagtcgac ggtaccgcgg gcccgggatc caccggtcgc caccatggtg
4381 agcaagggcg aggagctgtt caccggggtg gtgcccatcc tggtcgagct ggacggcgac
4441 gtaaacggcc acaagttcag cgtgtccggc gagggcgagg gcgatgccac ctacggcaag
4501 ctgaccctga agttcatctg caccaccggc aagctgcccg tgccctggcc caccctcgtg
4561 accaccctga cctacggcgt gcagtgcttc agccgctacc ccgaccacat gaagcagcac
4621 gacttcttca agtccgccat gcccgaaggc tacgtccagg agcgcaccat cttcttcaag
4681 gacgacggca actacaagac ccgcgccgag gtgaagttcg agggcgacac cctggtgaac
4741 cgcatcgagc tgaagggcat cgacttcaag gaggacggca acatcctggg gcacaagctg

4801 gagtacaact acaacagcca caacgtctat atcatggccg acaagcagaa gaacggcatc
4861 aaggtgaact tcaagatccg ccacaacatc gaggacggca gcgtgcagct cgccgaccac
4921 taccagcaga acacccccat cggcgacggc cccgtgctgc tgcccgacaa ccactacctg
4981 agcacccagt ccgccctgag caaagacccc aacgagaagc gcgatcacat ggtcctgctg
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5221 gtttattgca gcttataatg gttacaaata aagcaatagc atcacaaatt tcacaaataa
5281 agcatttttt tcactgcatt ctagttgtgg tttgtccaaa ctcatcaatg tatcgcttgt
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5401 gtttttgttt tttttaataa ataaataaac ataaataaat tgtttgttga atttattatt
5461 agtatgtaag tgtaaatata ataaaactta atatctattc aaattaataa ataaacctcg
5521 atatacagac cgataaaaca catgcgtcaa ttttacgcat gattatcttt aacgtacgtc
5581 acaatatgat tatctttcta gggttaatct agctgcgtgt tctgcagcgt gtcgagcatc
5641 ttcatctgct ccatcacgct gtaaaacaca tttgcaccgc gagtctgccc gtcctccacg
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5821 atccgccggg agcggatttg aacgttgtga agcaacggcc cggagggtgg cgggcaggac
5881 gcccgccata aactgccagg catcaaacta agcagaaggc catcctgacg gatggccttt
5941 ttgcgtttct acaaactctt cctggctagc ggtacgcgta ttaattgcgt tgcgctcact
6001 gcccgctttc cagtcgggaa acctgtcgtg ccagctgcat taatgaatcg gccaacgcgc
6061 ggggagaggc ggtttgcgta ttgggcgctc ttccgcttcc tcgctcactg actcgctgcg
6121 ctcggtcgtt cggctgcggc gagcggtatc agctcactca aaggcggtaa tacggttatc
6181 cacagaatca ggggataacg caggaaagaa catgtgagca aaaggccagc aaaaggccag
6241 gaaccgtaaa aaggccgcgt tgctggcgtt tttccatagg ctccgccccc ctgacgagca
6301 tcacaaaaat cgacgctcaa gtcagaggtg gcgaaacccg acaggactat aaagatacca
6361 ggcgtttccc cctggaagct ccctcgtgcg ctctcctgtt ccgaccctgc cgcttaccgg
6421 atacctgtcc gcctttctcc cttcgggaag cgtggcgctt tctcatagct cacgctgtag
6481 gtatctcagt tcggtgtagg tcgttcgctc caagctgggc tgtgtgcacg aacccccccgt
6541 tcagcccgac cgctgcgcct tatccggtaa ctatcgtctt gagtccaacc cggtaagaca
6601 cgacttatcg ccactggcag cagccactgg taacaggatt agcagagcga ggtatgtagg
6661 cggtgctaca gagttcttga agtggtggcc taactacggc tacactagaa gaacagtatt
6721 tggtatctgc gctctgctga agccagttac cttcggaaaa agagttggta gctcttgatc
6781 cggcaaacaa accaccgctg gtagcggtgg ttttttgtt tgcaagcagc agattacgcg
6841 cagaaaaaaa ggatctcaag aagatccttt gatcttttct acggggtctg acgctcagtg
6901 gaacgacgcg taactcacgt taagggattt tggtcatgag cttgcgccgt cccgtcaagt
6961 cagcgtaatg ctctgccagt gttacaacca attaaccaat tctgattaga aaaactcatc
7021 gagcatcaaa tgaaactgca atttattcat atcaggatta tcaataccat atttttgaaa
7081 aagccgtttc tgtaatgaag gagaaaactc accgaggcag ttccatagga tggcaagatc
7141 ctggtatcgg tctgcgattc cgactcgtcc aacatcaata caacctatta atttcccctc
7201 gtcaaaaata aggttatcaa gtgagaaatc accatgagtg acgactgaat ccggtgagaa
7261 tggcaaaagt ttatgcattt ctttccagac ttgttcaaca ggccagccat tacgctcgtc
7321 atcaaaatca ctcgcatcaa ccaaaccgtt attcattcgt gattgcgcct gagcgagacg
7381 aaatacgcga tcgctgttaa aaggacaatt acaaacagga atcgaatgca accggcgcag
7441 gaacactgcc agcgcatcaa caatattttc acctgaatca ggatattctt ctaatacctg
7501 gaatgctgtt tttccgggga tcgcagtggt gagtaaccat gcatcatcag gagtacggat
7561 aaaatgcttg atggtcggaa gaggcataaa ttccgtcagc cagtttagtc tgaccatctc
7621 atctgtaaca tcattggcaa cgctaccttt gccatgtttc agaaacaact ctggcgcatc
7681 gggcttccca tacaagcgat agattgtcgc acctgattgc ccgacattat cgcgagccca
7741 tttataccca tataaatcag catccatgtt ggaatttaat cgcggcctcg acgtttcccg
7801 ttgaatatgg ctcataacac cccttgtatt actgtttatg taagcagaca gttttattgt

```
    7861 tcatgatgat atatttttat cttgtgcaat gtaacatcag agattttgag acacgggcca
    7921 gagc
//
```

9. Genomic sequence flanking the Aal-M insertion on the 3' piggyBac side. One Nanopore read was obtained, including 962bp in the piggyBac transposon and ~1400bp of flanking sequence. We corrected the Nanopore read by PCR, placing the forward primer in the piggyBac transposon and the reverse primer in the flanking sequence. Corrected sequence is displayed in capital letters while the remaining low-quality sequence is in lower case. The NCBI BLAST tool in "discontinued megablast" mode detected a fragmented hit on scaffold 16 with 100% query cover and 90% identity. The hit on scaffold 16 is located between the genes LOC109423234 (uncharacterized, 5-9kb on 5' side) and LOC115263786 (uncharacterized protein K02A2.6-like, 61-65kb on 3' side). According to the latest genomic assembly, scaffold 16 is located on chromosome 1, long arm at position 12 (1q12).

TTAAccacGAATTCTTTTAGGGATTCCTCCAGAGTCCTACCAGAAATTCATTTAGGGATATCTCCAGGAAA
TCCTTGAGAAATTCGTCCAGGGATCCAGGAATTCCTCCAGAGTATCCTTCAGGCATTCCGGTCAGAAATC
TTTAAGGGGTTCATCCTCGGATTTGTTCAGCAATCCATCCATGAATTCATCAAGAATACGCTCTGCTGCTT
CTGCAAATGAATTCTTTCAGAATTTCGTCCTGTGATTCTTTCAGGGATATTTATTATTGAGATTATTTTTTC
CGAGAAATCCTTCAAGAAGTTATCCATTGATTTTTTTCAAGAACTCCTCCACAAGTTTTTTCAGGGATGTT
TAGAGAGTGTCCTTCAATGATTCTTCCAAAAAATAGTCAAGTCACTCGTTTAGAAATTCCCTCGGCAATA
CCTCAAGGATTCCCTTCAGCGATTGTTTTAGGACTTATCCTAGGGGTTTGTTCAAATATTACATAACGCTA
AGGGGGAGAGAGGGGGTCTAGCTCTGTGTTACGATTCATACAACATTCTTAAAGTTTTCATATAAAATTT
GTTACGTGGGGGAGGGAGGGGGTCTTAAATTGTGAAATTTTGCGTTACGTAATATTTGAAAGAACCTTA
GGATTTCTTCAGGGATTCCACCAGGGACCTCCTTTCGAGTTTTTTTTTTGTAAAGATTCTTTCAGAAATTT
CTCCAAGAAATTGCCTAAAAATTTTCCAGGAATCTCTTAAGCAGTTCCTTCAGGGATTGTATCAGGAATT
CCTATACCTAATAAATCTTTCAGGGATTCTTCAAAGCAACACGCATGTTACAGAAGTGTCACGGCAGTGC
GCAAGGTTTTGTTTTCGAAAAAGTCACTGTGACCTACTTTATACAAATAAGTACCTACATGCTTGAATCG
CTTACAAACANTTTTTCCAGGGAATCTATCAGGAATTCACCCAGAGAAAACTTTTTTGGAATTTTCCCAG
GGTTTGTCCGACAATTACCATAAGAAAAAGTATCAGGAGTTCCCCTAGGAAWTCCTTCTCAAATTCCTTC
ATTTTGAATATATTCTAGCGATTCGTCTAGGAATCCCTTCAGGTGAATTTCAGGATTTTTTCAAGAACTTC
ATTATTTGCGAGTTCTCCGGAAATACCTCAAGAATTTCTCCAGGGATTTCTTACAGGAATACCTCGAGGG
TTTCCTCTAGTGGTAGTTACAAGGTTTAACGAGAAGCCTTCAgaattcttccaaagatccttccggaatacgtcccttgacattcctata
ggattatgctcagggatgtttttatttgtatatttgcacatacaactgtcttgcagataagaaagtatagcaaacatggaaagagagtgttcggagaaactgaataaacgggaaa
aaaacctggaacatattttgata

10. Genomic sequence flanking the Aal-m insertion on the 3' piggyBac side. In black: sequence confirmed by sequencing PCR products. In Blue: low-quality sequence (2x coverage) obtained from two Nanopore reads

TTAAGCTAGTATTTACATTCTGGTTTCCGATTTAGTTTAATAAGAATCAATCCGCAAACAGAGATAAGAT
TTTGTATCCTGGCCCGAGGTAGTGGCTCACAATGGCTCAACGCAGACCCAAGCAACACAGAAAACATCT
TTGGACCATCAGTATTTCCAAAGATGTTTTTTAAGTGAATTATAAGCGATTCAGAAAACATCTTGTGTTA
ATATCCAGCTCTAATTATGCTGATCGAAAACAAACAACATCAAACATGTTATTGTCTATATCACGTATGA
AATATGTTTATATAACTATCAGTGAATCAAAATTCAACCATCGCGCAACAATAATGACAATGTCGCAAC
CTGTATTTGTTGCGACAAAACAACCCATGCGACATATGTTTGTCCCAACTTGAAAATAATGGGATTAACA
TCGTACACCACGAGTTTAGAGATTTTAAGCCTTGCATTGCGATTTTCGAACGGTTACTTCGAGTCGGTAA
ACACTGCAACTCTGGTGAAGCTCTATCATCAAACAGTTTCGACTTTGGATTAGTAATAATTGATTATTCA
CGAGTTGAAAAGTACGCAACAAATTCAGCTTCCGTTTTGTCTGCAACAAAAAATTTCGAGATCATGTCAT
TATCTGTCACCAGTAGGGATAAAGACTATCCATCACATCTTCTTTGTTGCTTGTTTTGTGCCTCTTTTGTCT
GACAATTCTCTTCACTGATAACTATTATATAACAGAAACATCAAGTTGCTAATTCAATCATATGTAAAAG
CAAACGCGACAGAACAACAGAAAGAAGATAAAGATAAAAATAAACCAAAATGCAAACATTGTACCGTC
TACCCCCGATGGTTTGAACGACACCTCATGCAAACCAACGGGGTTCTTTTTTTAATTTGAACTTTTAGTA
ACCCTGTGGACATCAACAAACGTACTTTTGGTAACCTTATTTGTTGTTTTGTTTTGATTCTGCGTTCCGTTT
CACCGCGTTCCATGGGCAGAATGACGTTTGAACCATTTTTAGTTTGAACGATGTGCAGATTGGCGGGGGT
CAAATTAAAAAGTGTTCAGATTAGATGCTGTCAAACCAATGGGGGTAGACGGTATGCATTGATTTTAAC
CATTCCTAGGAGGCTCTGGTCGATGGGGGAGAGTGAGTGGTTCAAGGGACCACGTCCCCCACGTCCGAC
GAACGTCCCCGCGCTAATTAGGATCACCATACACAAATTTGGCCATCATCCTCAAGGCCAAAATGTACA
GGCTGCTGATCTACCAACTGGTCTGTCGAATACTATCCAGAAACACCGCGCAACTTGTATTCCGGCCTAT
GTGAAAGAATCAGCATCCAACAGTCGGTGCTATTCCAACTCCAGCGTGAATTCCGGCACTCAAACTTCA
CCTCTCTGCCGTGTGCAGCATAGTTGTCCCATGTTCCAAAACAGCAAACTGAGAAAAACGCGTTTTAAGT
TTCAGCATTGTTTCCATCTCTACGGACAAGTGTAATAAAAACACAAAATGAATCCACCATCATAGCGTTA
GAATTGGTATTTATCATTGAAGTTTGAACAAAAAGTTTCATAAACATACAATTTACTTTGATTACACGGT
CCGACAAAAAATCAACTTTTGTTCTGCCCAGCTCWTAAATTTCACTTTTTCTGATTACTCCCGACTAGAA
ACTCATAAATCCGAAGTTTTGACCACTCCCCCTCCTGGGAGAGGRRGGGCATTGATTTTKRAAATTTTGA
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SGAAACGGTGTTTTTACGAAATGATGTTTTARAGATTTCTTATAKTGCACGCAAAGAATCCAACTACTAT
ATGGCACAATTGTTGATTTAATCATGTCGTTTAGCATCATRGTGTCTTCGAGGAAGTTTTTCACTACAATA
ACGTGCTTCTTTTAACCTGTTGGTAAAAACGATCAATCCCCCTAAAAGTGAGATAGAAAATTTTCTTTTTT
AATTTTTCAAGATRCAAGGTTGATGTCTTCACAAGAGTTGTAGAAAATGCTGTTCTGAATAACTTTGTCG
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TGACTTTCTAAAGGAGACAAKTACTTGTACTTTCGCATTTTGCACTTACATTAAAAGTTTTATTACTAGAG
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GCSCACTACTGYTATAAGCAAATGTAAGCAAATTACCTCATACAAATGCGAAAGTACAARTAATTGTCTC
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AAAAAGAAGTTATTGAGAAAAAACACTTTCAAGAGACCGCCSGCAMTGAAMYRTAACGTAATCTTGAA
AACTAACGGAGTTMGCTAAATTTCATGGATATTCACCATCCATTGACACTCCAAGTGATTTAGATGATGC
CGTTGATACTACAACGACCTTCATCATGGAAGCTTTTAAAGA:A:GCATGCCCTCTACGGTCTGTGAAGAT
CACAAGAGGAACCCCTTGG:TGGAACTCTGATCTGGCGAA::ACTCAGGAAACAATGTAGAAAAACCTTTG
CACAAATGTTTCCAGCTTG:AGTGAAGTCAGTCGGTTAAACAATTTCCTTGCGAAATCTAAGGATTTCCG
GGTGAACGAACTTCGTTTGCCAGARTGGCGATCTGACTTCCTCTGATGAGGAAGTTTTTGGAATCTTATT
CAGCACACAYTYCCTGGATGTGTGGATATTACATCTTCCGGATGATCCTGATGTCTTTTCTTGTAGTTATG
ATTCTTTRGCTTTTTTAACTRTAGAATCGATTGAGTGGGCTCTTAATAGCTTTGCTCCTTTCAAATCTCCTG

GGGCRGATGGGATTTRTCCTATTTTGCTTCCAGAAGGGATTTGATTATTTCAAACATGTTTTGAAAAAAC
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TCATGTGAACCAACATGCCTACCAATCTGGTAAGTCCACTGTGACTCTTTTACACAAGGTTGTTTACGAT
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GCAATGCCGGCGTACTTTTGARTRCAGCTWGGGTCTAAAACCCAAGTATATCAAATGGATTTACACAAC
TGTRGTTCGGCYAATAKTGGCTTATGGATGTCTTAKTAGTGGTAGCAAAAGGGTGAAGTAGRGAACGGT
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TCTTGCACTTACCGGTTACGGGTACTCGGTCTAGMKGAAACTCCTRTAATGAAACGCACATCAACACAC
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