**Supplemental Text**

**Description of the FKX transgenic construct**

The full nucleotide sequence of the piggyBac construct inserted in the Ngousso strain of *A. gambiae* is shown below in annotated Genbank format, along with a stretch of the genomic sequences flanking the insertion site on the X chromosome.

LOCUS FK annotated 10481 bp DNA linear

FEATURES Location/Qualifiers

 misc\_feature 9924..10481

 /note="flanking chromosomal sequence, 3' side"

 misc\_feature complement(9641..9673)

 /note="loxP"

 misc\_feature 9674..9923

 /note="piggyBac vector, 3' sequence"

 misc\_feature complement(9163..9594)

 /note="gypsy insulator from D. melanogaster"

 misc\_feature complement(9132..9153)

 /note="attB1"

 misc\_feature 8315..9102

 /note="drosomycin terminator from D. melanogaster"

 misc\_feature 6867..8295

 /note="dTomato"

 misc\_feature 5352..6847

 /note="AGAP002620 promoter region"

 misc\_feature 5324..5350

 /note="attB4"

 gene 4341..5057

 /note="EYFP (Clontech)"

 misc\_feature 5064..5320

 /note="SV40 term sequences"

 misc\_feature 2636..4337

 /note="Vitellogenin (AGAP004203) promoter"

 misc\_feature complement(2612..2634)

 /note="attB3"

 misc\_feature complement(2371..2576)

 /note="3xPax3-hsp70 promoter"

 misc\_feature complement(1632..2351)

 /note="GFP"

 misc\_feature complement(1393..1614)

 /note="SV40 term sequences"

 misc\_feature complement(889..1319)

 /note="gypsy insulator from D. melanogaster"

 misc\_feature 1330..1350

 /note="attB2"

 misc\_feature complement(594..814)

 /note="phage PhiC31 attP'"

 misc\_feature complement(825..858)

 /note="loxP"

 misc\_feature 284..593

 /note="piggyBac vector, 5' sequence"

 misc\_feature 1..283

 /note="flanking chromosomal sequence, 5' side"

ORIGIN

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 61 GTAAATATAT AAAAGCCGTT TCAAAAAGGG TGCCGTAGAC TTCTTATTCT TAGTGTTGGA

 121 AACTCGTGAG TGCCCAACAG TCTGTCAGGT GACAACGCTA GAGAAGAGAG TGAGAGGGAG

 181 GATAAAAACG GTAAATTAGG AGATAAGGAG AAGGGTTGGT CCGCTCCTAA CCAGTTAGTT

 241 GAAATTCGAC AATCGGTACA AGTGGACTAA TTTTTGGATT TAAccctaga aagatagtct

 301 gcgtaaaatt gacgcatgca ttcttgaaat attgctctct ctttctaaat agcgcgaatc

 361 cgtcgctgtg catttaggac atctcagtcg ccgcttggag ctcccgtgag gcgtgcttgt

 421 caatgcggta agtgtcactg attttgaact ataacgaccg cgtgagtcaa aatgacgcat

 481 gattatcttt tacgtgactt ttaagattta actcatacga taattatatt gttatttcat

 541 gttctactta cgtgataact tattatatat atattttctt gttatagatt agatcgcgct

 601 cgcgcgactg acggtcgtaa gcacccgcgt acgtgtccac cccggtcaca accccttgtg

 661 tcatgtcggc gaccctacgc ccccaactga gagaactcaa aggttacccc agttggggca

 721 ctactcccga aaaccgcttc tgacctggga aaacgtgaag ccccggggca tccgctgagg

 781 gttgccgccg gggcttcggt gtgtccgtca gtactgcagg taccataact tcgtatagca

 841 tacattatac gaagttatac ctcccaacgc gttggatgca gcactagagt tgttggttgg

 901 cacaccacaa atatactgtt gccgagcaca attgatcggc taaatggtat ggcaagaaaa

 961 ggtatgcaat ataataatct tttattgggt atgcaacgaa aatttgtttc gtcaacgtat

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 8341 aaagcgcgtt tagctctcca ctacttacac atattctatg ctgcaatatt gaaaatctaa

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 8881 cgatgacacc gcaataaggt acaactttat attgtttttg caatcagctt gagtctttat

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 9241 caatataata atcttttatt gggtatgcaa cgaaaatttg tttcgtcaac gtatgcaata

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 9901 acaatatgat tatctttcta gggTTAACCT CATACCACAG TAAATAAAGT GTTTTCTCTA

 9961 AAAAATCCAC CGCGTTTTTC AACACTTAGA CTTCACTTCT TATCACATAA AGTTCTCACT

 10021 ACTCGTAAAA CACAATCAAG AAAGTGTCCC AAAATTAAGA AAACTCCCGA AATCTCTTGT

 10081 ATCTATTCGT GAGGTGCATC ATCAGCGTCG TGCGAGTAGC AGCATAATTC ATGGTGCACT

 10141 CAGGAAAAAT CATTCCGTGT AACAAACAAC AAGATACAAA AGTACAGGAA GTCCCTGAGA

 10201 TACACGGTAC CTCTAATACG CGGAATAGGA GATTCTAAAT ATGACAGTTC TTTGAGCAAA

 10261 TTGTACTGAT TTGACTCATC AATTTTTGTC AAATGCAAAA TAATTACCTT TTTGATCGAA

 10321 TGTTTAAAAC CAAATCAACA GGATTAAAAC TGTTAAATTT AATCAGACTC ATATCAAATA

 10381 ATAGATTACG TGGCTAAAAC CACCCCCTTG CACAATTAAA CGAAATTAGT GATATTTTGG

 10441 CTAAAAATTA AGAGGCTCGA CCTACGCAGA AATTCGAGAT A//

**Sequence of the transgenesis vector used to generate the FKX line**

The full annotated sequence of the empty transgenesis vector used to construct the FK reporter transgene is shown below. This vector is a derivative from pXLBacII ([22]: Li et al., Insect Mol Biol 14:1 (17-30), 2005). The *piggyBac transposase* gene under the control of the Drosophila *hsp70* promoter was inserted into the vector backbone (outside of the piggyBac transposon) to serve as a built-in transgenesis helper. A Gateway cassette, genetic insulators and various recombination sites were cloned into the piggyBac region (annotated in the sequence).

LOCUS piggyBac vector, E. Marois 9628 bp DNA circular 01-AUG-2012

FEATURES Location/Qualifiers

 misc\_feature 6853..6988

 /note="PiggyBac 5'region"

 misc\_feature 3718..3751

 /note="loxP"

 misc\_feature 6458..6678

 /note="attP' docking site"

 misc\_feature complement(339..2405)

 /note="piggyBac transposase"

 misc\_feature complement(2462..3049)

 /note="D. melanogaster hsp70 promoter"

 misc\_feature complement(2407..2462)

 /note="rrnB terminator from E. coli"

 misc\_feature 6414..6447

 /note="loxP"

 misc\_feature 3468..3705

 /note="piggyBac 3'region"

 misc\_feature 3799..4229

 /note="gypsy insulator from Drosophila"

 misc\_feature 4235..5947

 /note="Gateway cassette RfB (Invitrogen)"

 misc\_feature 4239..4363

 /note="attR1"

 misc\_feature 5953..6383

 /note="gypsy insulator from Drosophila"

 misc\_feature complement(5819..5942)

 /note="attR2"

ORIGIN

 1 CTAAATTGTA AGCGTTAATA TTTTGTTAAA ATTCGCGTTA AATTTTTGTT AAATCAGCTC

 61 ATTTTTTAAC CAATAGGCCG AAATCGGCAA AATCCCTTAT AAATCAAAAG AATAGACCGA

 121 GATAGGGTTG AGTGTTGTTC CAGTTTGGAA CAAGAGTCCA CTATTAAAGA ACGTGGACTC

 181 CAACGTCAAA GGGCGAAAAA CCGTCTATCA GGGCGATGGC CCACTACGTG AACCATCACC

 241 CTAATCAAGT TTTTTGGGGT CGAGGTGCCG TAAAGCACTA AATCGGAACC CTAAAGGGAG

 301 CCCCCGATTT AGAGCTTGAC GGGGAAAGCC TCGACGGATC CAAATTCAAC AAACAATTTA

 361 TGTTTATTTA TTTATTAAAA AAAAACAAAA ACTCAAAATT TCTTCTATAA AGTAACAAAA

 421 CTTTTAAACA TTCTCTCCTT TACAAAAATA AACTTATTTT GTACTTTAAA AACAGTCATG

 481 TTGTATTATA AAATAAGTAA TTAGTTTAAC TTATACATAA TAGAAACAAA TTATACTTAT

 541 TAGTCAGTCA GAAACAACTT TGGCACATAT CAATATTATG CTCTCGACAA ATAACTTTTT

 601 TGCATTTTTT GCACGATGCA TTTGCCTTTC GCCTTATTTT AGAGGGGCAG TAAGTACAGT

 661 AAGTACGTTT TTTCATTACT GGCTCTTCAG TACTGTCATC TGATGTACCA GGCACTTCAT

 721 TTGGCAAAAT ATTAGAGATA TTATCGCGCA AATATCTCTT CAAAGTAGGA GCTTCTAAAC

 781 GCTTACGCAT AAACGATGAC GTCAGGCTCA TGTAAAGGTT TCTCATAAAT TTTTTGCGAC

 841 TTTGAACCTT TTCTCCCTTG CTACTGACAT TATGGCTGTA TATAATAAAA GAATTTATGC

 901 AGGCAATGTT TATCATTCCG TACAATAATG CCATAGGCCA CCTATTCGTC TTCCTACTGC

 961 AGGTCATCAC AGAACACATT TGGTCTAGCG TGTCCACTCC GCCTTTAGTT TGATTATAAT

 1021 ACATAACCAT TTGCGGTTTA CCGGTACTTT CGTTGATAGA AGCATCCTCA TCACAAGATG

 1081 ATAATAAGTA TACCATCTTA GCTGGCTTCG GTTTATATGA GACGAGAGTA AGGGGTCCGT

 1141 CAAAACAAAA CATCGATGTT CCCACTGGCC TGGAGCGACT GTTTTTCAGT ACTTCCGGTA

 1201 TCTCGCGTTT GTTTGATCGC ACGGTTCCCA CAATGGTTAA CTTATACGGT TCTTGTAGTA

 1261 AGTTTTTTGC CAAAGGGATT GAGGTGAACC AATTGTCACA CGTAATATTA CGACAACTAC

 1321 CGTGCACAGG CTTTGATAAC TCCTTCACGT AGTATTCACC GAGTGGTACT CCGTTGGTCT

 1381 GTGTTCCTCT TCCCAAATAA GGCATTCCAT TTATCATATA CTTCGTACCA CTGTCACACA

 1441 TCATGAGGAT TTTTATTCCA TACTTACTTG GCTTGTTTGG GATATACATC CTAAACGGAC

 1501 ACCGTCCTCT AAAACCAAGT AACTGTTCAT CTATGGTCAA ATGAGCCCCT GGAGTGTAAT

 1561 TTTGTATGCA CTGATGGATA AAGAGATCCC ATATTTTTCT AACAGGAGTA AATACATCGT

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 1681 CAAAACGATC ACGACTCATT ACAGAGACGT ACACCATTGA CAAAGATCGA TCAAAGAGGT

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 1861 TCAATGATAT CTCAGCATTT GTCCATTTTA CAATTTCCGA AATTATCTCA TCAGTAAAAA

 1921 ATAGTTTGAA GCATAAAAGT GGGTCATATA TATTGCGGCA CATACGCGTC GGACCTCTTT

 1981 GAGATCTGAC AATGTTCAGT GCAGAGACTC GGCTACGCCT CGTGGACTTT GAAGTTGACC

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 2341 ATAGGATCCC CGACACCAGA CCAACTGGTA ATGGTAGCGA CCGGCGCTCA GCTGGAATTA

 2401 GGCCTTCTAG acagataaaa cgaaaggccc agtctttcga ctgagccttt cgttttattt

 2461 gAAATTCCCA ATTCCCTATT CAGAGTTCTC TTCTTGTATT CAATAATTAC TTCTTGGCAG

 2521 ATTTCAGTAG TTGCAGTTGA TTTACTTGGT TGCTGGTTAC TTTTAATTGA TTCACTTTAA

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 3181 CCCATTCGCC ATTCAGGCTG CGCAACTGTT GGGAAGGGCG ATCGGTGCGG GCCTCTTCGC

 3241 TATTACGCCA GCTGGCGAAA GGGGGATGTG CTGCAAGGCG ATTAAGTTGG GTAACGCCAG

 3301 GGTTTTCCCA GTCACGACGT TGTAAAACGA CGGCCAGTGA GCGCGCCTCG TTCATTCACG

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