Table S1. All *Ae. aegypti* samples analysed in this study and associated publications

Colony designation, City and country of original catch and Accession number	Date of original catch/ Date and generation (g) of sequencing	Wild-caught/ Field derived strain/ Laboratory strain	Total-RNA or sRNA sequencing	Tissues sequenced	REF
African Samples					
Bakoumba, Gabon BioProject accession: PRJNA386453	Wild-caught: ~2014 Deposited in SRA: 2017-05-12	Field derived strain	**mRNA, polyA enriched**	Individual midgut libraries or whole mosquitoes	(1)
Rabai, Kenya (K2, K4, K14, K18, K19, K27) BioProject accession: PRJNA233429	Collected: January 2009 Sequencing: 2010-2011, g5/g8 Deposited in SRA: 2014-01-04	Field derived strain	**mRNA, polyA enriched** Illumina TruSeq RNA Sample Prep Kit v. 2 and mRNA Sequencing Sample Prep Kit.	Antenna	(2)
Rabai, Kenya (GP1, GP2, HP1, HP2) BioProject accession: PRJNA233429	Collected: January 2009 Sequenced: 2010-2011, F2 of K27(G5) and K14(G5) cross Deposited in SRA: 2014-01-04	Field derived strain	**mRNA, polyA enriched** As above	Antenna	(2)
Shauri Moyo (Moyo-S/R), Mombasa, Kenya BioProject accession: PRJNA396016	Collected: ~1980s Deposited in SRA: 2017-07-27	Lab strain	**sRNA sequencing** Epicentre ScriptMiner kit (Cat. No. SMMP101212)	Second, third, fourth instar larvae and adults	(3)
Bundibugyo (U30), Uganda BioProject accession: PRJNA233429	Collected: January 2009 Sequenced: 2010-2011, g3 Deposited in SRA: 2014-01-04	Field derived strain	**mRNA, polyA enriched** As above	Antenna	(2)
Wakiso, Uganda BioProject accession: PRJNA556544	Collected: 2016 Deposited in SRA: 2019-07-25	Mosquito homogenates passaged on c6/36 cells.	**ViralRNA-** RNA extracted using QIAamp Viral RNA Mini Kit (Qiagen) Library preparation using Nextera XT DNA Kit (Illumina)	Cell culture isolated virus from a laboratory colony of *Aedes aegypti* homogenised and passaged in c6/36 cells 2 passages.	(4)
Australian / Asian Samples					
Cairns, Queensland, Australia BioProject accession: PRJNA413709	Collected: March-June 2014 Deposited in SRA: 2017-10-09	Wild pools	**Total-RNA, Ribosomal-RNA depleted**	Pooled whole mosquitoes	(5)
Cairns, Queensland, Australia Available on FigShare: https://doi.org/10.26180/5bb0d5ae69035	Collected in Cairns in March 2014, continually maintained	Field derived strain	**mRNA, polyA enriched** Illumina TruSeq Stranded mRNA-Seq	Pooled whole mosquitoes	(6)
North Queensland Strain, Australia BioProject accession: PRJNA255495	Origin: Cairns Collected prior to 2013 Deposited in GEO: 2014-07-17	Field derived strain	**sRNA sequencing** Illumina TruSeq Small RNA	Pooled whole mosquitoes	(7)
Innisfail, North Queensland, Australia BioProject accession: PRJNA630779	Collected: 2016-04 Deposited in SRA: 2020-05-06	Field derived strain	Poly(A) mRNA isolation & Ribo-Zero rRNA removal Kit (Illumina)	Female adult bodies with wings and legs removed (n=6)	(8)
Innisfail North Queensland, Australia BioProject accession: PRJNA545086	Wild collected April 2017, and the F3-5 generations were used for the experiments. Deposited in SRA: May 28, 2019	Field derived strain	RNA depletion using Ribo-Zero Gold rRNA Removal Kit (Illumina, USA) followed by library preparation using TruSeq 2 Library Preparation Kit	Pooled female adult mosquitoes.	(9)
Townsville, Queensland, Australia GEO accession: GSE100917	Wild Collected: March 2015 Sequenced: June/July 2015 Deposited in GEO: 2017-07-07	Field derived strain	**sRNA sequencing** Illumina TruSeq Small RNA	Pooled whole mosquitoes	(10)
Kampong Cham, Cambodia BioProject: PRJNA556544	Single lab colony female: 2013 Single wild-caught female: 2013 Cell culture homogenates: 2015 Deposited in SRA: 2019-07-25	Mosquito homogenates passaged on c6/36 cells, and single mosquitoes used for sequencing.	ViralRNA RNA extracted using QIAamp Viral RNA Mini Kit (Qiagen) Library preparation using Nextera XT DNA Kit (Illumina)	Cell culture isolated virus from a laboratory colony of *Aedes aegypti* after 3 passages. Two individual mosquitoes: one wild-caught and one from the colony	(4)
Phnom Penh, Cambodia BioProject: PRJNA556544 SRA accession: SRR9830742	Cell culture homogenates: 2015 Deposited in SRA: 2019-07-25	Mosquito homogenates passaged on c6/36 cells		Cell culture isolated virus from laboratory colony of *Aedes aegypti* after 2 passages.	
Fuzhou, Fujian province, China BioProject accession: PRJNA476690	Samples collected 2015, Deposited in SRA: 2018-06-19	Unknown origin	Total-RNA	Midgut	(11)
Bora-Bora, French Polynesia BioProject accession: PRJEB15531	~Caught in 1990, Deposited in SRA: 2016-12-29	Field derived strain	TruSeq Stranded mRNA sample Prep kit	Whole non-blood fed adult females	(12)
Bora-Bora, French Polynesia BioProject accession: PRJEB1859	~Caught in 1990 RNA-Seq produced ~2010 Deposited in SRA: 2013-09-02	Field derived strain	Total-RNA	Larval midguts	(13)
Bora-Bora, French Polynesia BioProject accession: PRJEB1859	~Caught in 1990 RNA-Seq produced ~2013 Deposited in SRA: 2013-09-02	Field derived strain	Total-RNA, polyA enriched	G_{11} larvae obtained from three independent egg batches Selected for insecticide resistance	(14)
Bora-Bora, French Polynesia BioProject accession: PRJEB32622	~Caught in 1990 Deposited in GEO: 2019-05-17	Field derived strain	Total-RNA, polyA enriched	Whole larval pooled samples	(15)
Toahotu, Tahiti, French Polynesia BioProject accession: PRJNA382618	Collected 2014-2015 Sequencing: ~2016, 9th-14th generation Deposited in SRA: 2017-04-12	Field derived strain	Total-RNA	Pooled saliva samples	(16)
New Delhi India Sequencing available from Figshare URL: https://figshare.com/s/ce9f231e8a4dde617722	Unknown	Unknown	Total-RNA	Whole mosquitoes	(17)
Xayaboury, Luang Prabang, Vientiane Capital, Saravane, Attapeu Laos BioProject accession: PRJEB37991	Collected: 2014 Fifth generation lab colony subjected to sequencing Deposited in SRA: 2020-05-01	Field derived strain	Oligo-dT selection of total-RNA NEBNext® UltraTM II directional RNA library Prep Kit for Illumina (New England Biolabs)	Whole female 3-days old adult non-blood fed	(18)
Jinjang, Selangor, Malaysia BioProject accession: PRJNA320356	Field caught 1975 Deposited in SRA: 2016-05-19	Lab strain	Total-RNA, Poly-A enriched	Germline	(19)
Bangkok, Thailand BioProject accession: PRJNA413709	Wild-caught: June 2015 Deposited in SRA: 2017-10-09	Wild pools	Total-RNA, Ribosomal-RNA depleted	Whole mosquitoes	(5)
Bangkok, Thailand BioProject accession: PRJNA612326	Wild-caught: 2009 Deposited in SRA: 2020-03-12	Lab strain	PolyA enriched NEBNext Poly(A) mRNA Magnetic Isolation kit	Female spermathecae of blood fed and non-blood fed adults.	(20)

Kamphaeng Phet, Thailand BioProject accession: PRJNA310013	Wild-caught in 2011, supplemented with mosquitoes every 2-3 years Sequencing conducted in October 2013 and January 2014 Deposited in SRA: 2016-01-27	Lab strain	Total-RNA	Female reproductive organs	(21)
Kamphaeng Phet, Thailand BioProject accession: PRJNA487089	As above: Sequencing conducted: June and August of 2017 Deposited in SRA: 2018-08-21	Lab strain	Total-RNA	Male reproductive organs	(22)
Kamphaeng Phet Province, Thailand BioProject accession: PRJNA482553	Deposited in SRA: 2018-07-12	Field derived strain (26 generations)	mRNA	Embryos, engorged female mosquitoes	(23)
Phetchaburi, Thailand BioProject accession: PRJEB15531	Collected during 2014-2015 Sequenced: Using G2 Deposited in SRA: 2016-12-29	Field derived strain	Total-RNA, polyA enriched	Whole non-blood fed adult females	(12)
Nakhonsawan, Thailand BioProject accession: PRJEB15531	Collected during 2014-2015 G2 used for sequencing Deposited in SRA: 2016-12-29	Field derived strain	Total-RNA, polyA enriched	Whole non-blood fed adult females	(12)
Nakhon Nayok Province, Thailand BioProject accession: PRJNA276135	Wild collected 2008 Deposited in SRA: 2015-02-23	Wild pools	Total-RNA PolyA depleted, Ribosomal-RNA depleted	Whole mosquitoes	(24)
Thep Na Korn (KPP), Thailand BioProject accession: PRJNA386455	Wild-caught in 2013 Sequencing conducted within ten generations Deposited in SRA: 2017-05-12	Field derived strain	Total-RNA, polyA enriched	Midguts	(25)
Thep Na Korn (KPP), Thailand BioProject accession: PRJNA540058	Wild-caught in 2013 Collected: 2018 Deposited in SRA: 2019-04-27	Field derived strain	ViralRNA RNA extracted using QIAamp Viral RNA Mini Kit (Qiagen) Library preparation using Nextera XT DNA Kit (Illumina)	Mosquito homogenates passaged on c6/36 cells and single mosquitoes used for sequencing.	(26)
Rayong (T32), Thailand BioProject accession: PRJNA233429	Wild-caught: January 2009 Sequenced: 2010-2011, G_4 Deposited in SRA: 2014-01-04	Field derived strain	mRNA, polyA enriched Illumina TruSeq RNA Sample Prep Kit v. 2 and mRNA Sequencing Sample Prep Kit.	Antenna	(2)
Ang Mo Kio, Singapore Kindly made available to us via Milly Choy, October Sessions, and Ooi Eng Eong.	Established in 2010	Field derived strain	mRNA	Total mosquitoes	(27)
Ang Mo Kio, Singapore BioProject accession: PRJNA533031	Colony established in 2010 Samples collected: 2016-12-31 Deposited in SRA: 2019-04-16	Lab strain	rRNA removal	Salivary glands from adult Female mosquitoes	(28)
American Samples					
Humaita, Tubiacanga and Belford Roxo, Rio de Janeiro, Brazil BioProject accession: PRJNA277466	Wild-caught 2013 Deposited in SRA: 2015-02-13	Field derived strain	**Poly-A enriched and Ribosomal-RNA depleted** TruSeq Stranded Total RNA kit **sRNA sequencing**	Whole pools of mosquitoes	(29)
Humaita, Tubiacanga and Belford Roxo, Rio de Janeiro, Brazil BioProject accession: PRJNA401335	Wild-caught 2013 F1 and F2 generations Deposited in SRA: 2015-02-13	Field derived strain	**sRNA sequencing** TruSeq Small RNA Library Prep Kit	Whole-body, Midgut and Carcass	(30)
Nova Iguaçu Rio de Janeiro, Brazil BioProject accession: PRJNA327841	Collected: Unknown Deposited in SRA: 2016-07-05	Field derived strain	**sRNA sequencing** TruSeq Small RNA Sample Prep Kit 7A (Illumina, USA)	Whole adult females	(31)
St-Georges & Cayenne, French Guiana BioProject accession: PRJEB15531	Collected during 2014-2015 G2 used for sequencing Deposited in SRA: 2016-12-29	Field derived strain	**mRNA -stranded** TruSeq Stranded mRNA sample Prep kit	Whole non-blood fed adult females	(12)
Les Abymes & Petit-Bourg Guadeloupe BioProject accession: PRJNA515586	Collected Les Abymes (2016, 2017), Petit-Bourg (2017)	Wild-caught	Viral RNA and DNA enrichment using published NetoVIR protocol	Multiple pools of adult male and female mosquitoes	(32)
Chetumal (CTM), Mexico BioProject accession: PRJNA192626, PRJNA174376, PRJNA147583	CTM derived from the Yucatan Peninsula in Mexico, 2005, Sequenced at different times: during 2011-2012	Lab strain	**polyA enriched mRNA** cDNA prepared with random primers	Whole blood-fed and sugar-fed female mosquitoes	(33-35)
Chetumal (CTM), Mexico BioProject accession: PRJNA533980	Lab adapted CTM colony Collection date: 2015 Deposited in SRA: 2019-04-21	Lab strain	**sRNA sequencing** TruSeq Small RNA Sample Prep Kit (Illumina, San Diego CA)	Midgut tissues	(36)
Chiapas, Mexico BioProject accession: PRJNA505498	Wild-caught August 2016	Wild-caught	**RNAse H/RT rRNA depletion**	Whole male and female mosquitoes	(37)
Cuernavaca, Mexico BioProject accession: PRJNA301038	Caught in Morelos 2004 Samples collected: Apr-2013 Deposited in SRA: 2015-11-03	Lab strain	**Total-RNA, mRNA** TruSeq RNA Sample Preparation Kit	Midgut tissue	(38)
Poza Rica, Mexico BioProject accession: PRJNA645199	Collected in 2011 Black Lab at Colorado State University Deposited in SRA: 2020-07-09	Lab strain	**Total-RNA random amplification** KAPA HyperPrep kit	Total mosquitoes	(39)
Tapachula, Mexico BioProject accession: PRJNA615972	Collected Jan-2016 F5 generation used for RNA-Seq	Field derived strain	**PolyA mRNA enriched** KAPA Stranded mRNA-Seq Kit for Illumina.	Midgut of mosquitoes	(40)
Puerto Rico, (wild pools)* BioProject accession: PRJNA307706	Wild-caught June 2014	Wild-caught	TruSeq Stranded Total RNA	Whole mosquitoes	(41)
Curepe, Trinidad BioProject accession: PRJNA476553	Wild-caught November 2015 Deposited in SRA: 2018-06-18	Field derived strain	Total-RNA, Poly-A enriched	Whole female mosquitoes	(42)
Curepe, Trinidad BioProject accession: PRJNA396016	Wild-caught November 2015 Deposited in SRA: Jul 27, 2017	Field derived strain	**sRNA sequencing** Epicentre ScriptMiner kit (Cat. No. SMMP101212)	Second, third, fourth instar larvae and adults	(3)
Galveston, Texas, USA BioProject accession: PRJNA382162, PRJNA399504	Wild-caught in Summer, 2003 Deposited in SRA: 2017-04-07	Lab strain	Total-RNA, PolyA enriched; sRNA	Whole mosquitoes	(43, 44)
Rexville D (REX-D) Red-eye strain, Puerto Rico BioProject accession: PRJNA401335	Wild-caught: 2013 Deposited in SRA: 2017-09-04	Lab strain	**sRNA sequencing** TruSeq Small RNA Library Prep Kit	Whole-body, Midgut and Carcass	(30)
Miami, USA (Lab adapted) BioProject accession: PRJNA386859	Wild-caught 2016 Sequenced: 2017 Deposited in SRA: 2017-10-16	Field derived strain	Total-RNA, Ribosomal-RNA depleted, Strand-specific RNA-Seq & sRNA	Soma and germline tissues	(45)
Miami, USA BioProject accession: PRJNA344504	Caught between August-Oct 2016 Deposited in SRA: 2017-05-17	Wild pools	Total-RNA, Ribosomal-RNA depleted,	Whole mosquitoes	(46)

Orlando, Florida, USA BioProject accession: PRJEB15531	Collected in Orlando, Florida/~1940s, Deposited in SRA: 2016-12-29	Lab strain	TruSeq Stranded mRNA sample Prep kit	Whole non-blood fed adult females	(12)
Orlando, Florida, USA BioProject accession: PRJNA487057	Collected in Orlando, Florida/~1940s Deposited in SRA: Aug 21, 2018	Lab strain	Total RNA, mRNA enriched TruSeq DNA Library Preparation Kit	Whole adult female mosquitoes	(47)
Orlando, Florida, USA BioProject accession: PRJNA148539	Collected in Orlando, Florida/~1940s, Submitted to GEO: Jul 26, 2011	Lab strain & transgenic transformed lines	sRNA sequencing	Whole adult mosquitoes	(48)
Key West, Florida, USA BioProject accession: PRJNA487057	Wild-caught in Key West (24.55° N, 81.78° W), and reared in the laboratory since 2011 Deposited in SRA: Aug 21, 2018	Lab strain	Total RNA, mRNA enriched TruSeq DNA Library Preparation Kit	Whole adult female mosquitoes	(47)
Manatee County, USA BioProject accession: PRJNA547758	Wild-caught 2016-2017 (May 15, 2016, and 33 June 19, 2017) four Manatee County sites	Wild-caught mosquitoes	Inverse-rRNA sequencing	Pooled abdomens from 20 adult females	(49)
Unknown or Ambiguous					
Rexville D (REX-D) Red-eye strain, Puerto Rico BioProject accession: PRJNA192626	Deposited in SRA: 2013-03-07	Field derived strain	**mRNA sequencing**	RNA was extracted from pools of 3 female mosquitoes using the standard Trizol (Invitrogen) protocol.	
Rexville D (RexD), Puerto Rico BioProject accession: PRJNA192626	Wild-caught 1988-1989 Sequencing: 2011 Deposited in SRA: 2013-03-07	Lab strain	**mRNA polyA enriched** oligo-d(T)25 magnetic beads (Dynabeads: Invitrogen, CA, USA) cDNA prepared with random primers	Whole blood-fed and sugar-fed female mosquitoes	(35)
Rexville D (RexD), Puerto Rico BioProject accession: PRJNA396016	Wild-caught 1988-1989 Deposited in SRA: Jul 27, 2017	Lab strain	**sRNA sequencing** Epicentre ScriptMiner kit (Cat. No. SMMP101212)	Second, third, fourth instar larvae and adults	(3)
Rexville D (RexD) Puerto Rico BioProject accession: PRJNA206074	Wild-caught 1988-1989 Deposited in SRA: 2013-05-31	Lab strain	**sRNA sequencing** FLASHPAGE system Library prep/ Small RNA Expression kit (Applied Biosystem)	Whole mosquitoes	(50, 51)
Higgs White Eye (HWE) strain (Variant of Rex-D), Puerto Rico GEO accession: GSE95378 BioProject accession: PRJNA376828	Wild-caught 1988-1989 Deposited in GEO: Feb 26, 2017	Lab strain	Total-RNA, Poly-A enriched	Adult midgut tissue	(52)
Higgs White Eye (HWE) strain (Variant of Rex-D), Puerto Rico BioProject accession: PRJNA475410	Deposited in SRA: 2018-06-10	Lab strain, transgenic lab strain	**sRNA sequencing**	Wild type, transgenic non-blood fed and blood-fed midguts	(53)
Rockefeller strain (ROCK) BioProject accession: PRJNA396016	Caribbean origin caught ~1930, Deposited in SRA: 2017-07-27	Lab strain	**sRNA sequencing** Epicentre ScriptMiner kit (Cat. No. SMMP101212)	Second, third, fourth instar larvae and adults	(3)
Rockefeller strain BioProject accession: PRJNA525617	Colony location: Wageningen, Netherlands Collected: May-2019	Lab strain	sRNA	Whole mosquito body, without legs and wings	(54)
Rockefeller strain (ROCK) BioProject accession: PRJNA388655	Caribbean origin caught ~1930, Deposited in SRA: 2017-05-31	Lab strain	sRNA	Corpora allata-corpora etagen complexes	(55)
Rockefeller strain (ROCK) BioProject accession: PRJNA311123	Caribbean origin caught ~1930, Deposited in SRA: 2016-12-08	Lab strain	Total-RNA	Saliva	(56)
Rockefeller strain, (ROCK) BioProject accession: PRJNA379149	Caribbean origin caught ~1930, Data deposited to GEO: March 14, 2017	Lab strain	Total-RNA	Adult female midguts	(57)
Rockefeller strain (ROCK) (available as MRA-734) BioProject accession: PRJNA54037	Caribbean origin caught ~1930, Sequencing conducted in October 2009 Deposited in SRA: 2010-10-15	Lab strain	Poly-A	Five female fat bodies pre and post blood meal	(58)
Rockefeller strain (ROCK) BioProject accession: PRJNA246607	Caribbean origin caught ~1930, Deposited in SRA: 2016-06-23	Lab strain	Total-RNA	Adult and larval malpighian tubules	(59)
Rockefeller (ROCK) (Publication) Liverpool (Metadata) BioProject accession: PRJNA314871	Deposited in SRA: 2016-03-10	Lab strain	Unknown	Adult female midguts	(60)
Rockefeller (ROCK) BioProject accession: PRJNA507369	Caribbean origin caught ~1930, Samples collected: 2017-06 Deposited in SRA: 2018-11-29	Lab strain	Poly-A	Male and female antennae	(61)
Rockefeller BioProject accession: PRJNA551490	Deposited in SRA: 2019-06-27	Lab strain	Poly-A enriched stranded mRNA library	Head and thorax of adult female mosquitoes	(62)
UGAL mGFP (transgenic strain) BioProject accession: PRJNA79693	Deposited in SRA: 2010-07-02	Transgenic mosquito	Poly-A enriched	Male and female first instar larvae	(63)
UGAL/Rockefeller BioProject accession: PRJNA360643	Caribbean origin caught ~1930, Deposited in SRA: 2017-01-09	Lab strain	CLIP-Seq bound to AGO-1, sRNA	Fat body	(64)
UGAL/Rockefeller BioProject accession: PRJNA340082	Caribbean origin caught ~1930, Collection date: May-2015 Deposited in SRA: 2016-08-25	Lab strain	Total-RNA	Larvae	(65)
UGAL, New Mexico State University BioProject accession: PRJNA246243	Caribbean origin caught ~1930, Deposited in SRA: 2014-05-05	Lab strain	Total-RNA, mRNA seq	Female fat body tissue	(66)
UGA BioProject accession: PRJNA421500	Caribbean origin caught ~1930, Sample collection date: Jun-2017 Deposited in SRA: 2017-12-07	Lab strain	Total-RNA, mRNA seq	Cultures containing first instars, gnotobiotic first instars	(67)
Liverpool, kh^w (white eye) BioProject accession: PRJNA214946	Deposited in GEO: 2013-08-12	Lab strain	sRNA	Head and whole mosquito samples	(68)
Liverpool strain BioProject accession: PRJNA147359	Deposited in GEO: Sep 20, 2011	Lab strain	sRNA	Whole female mosquitoes	(69)
Liverpool strain BioProject accession: PRJEB15531	Collected during 2014-2015 Deposited in SRA: 2016-12-29	Field derived strain	**mRNA -stranded** TruSeq Stranded mRNA sample Prep kit	Whole non-blood fed adult females	(12)
Liverpool strain GEO Accession: GSE35161 BioProject accession: PRJNA150789	Deposited in GEO: Jan 17, 2012	Lab strain	sRNA	Whole female mosquitoes	(70)
Liverpool strain BioProject accession: PRJNA232374	Deposited in SA: 2013-12-20	Lab strain	sRNA	Various developmental stages	(71)
Liverpool strain (Tu strain) GEO Accession: GSE34480 BioProject accession: PRJNA151475	Deposited in GEO: Dec 15, 2011	Lab strain	mRNA	Various tissues	(72)

Liverpool strain BioProject accession: PRJNA319716	Deposited in SRA: 2016-04-26	Lab strain	sRNA	Whole bodies	(73)
Liverpool strain Colorado State University BioProject accession: PRJNA261799	October 2009 Deposited in SRA: 2014-09-23	Lab strain	mRNA	Whole female and male mosquitoes	(74)
Liverpool strain BioProject accession: PRJNA356717	Deposited in SRA: 2016-12-08	Lab strain	Total-RNA	Whole mosquitoes	(75)
Liverpool strain BioProject accession: PRJNA298592	Deposited in SRA: 2015-10-13	Lab strain	Total-RNA, mRNA	Midguts	(76)
Liverpool strain BioProject accession: PRJNA445828	Deposited in SRA: 2018-03-27	Lab strain	mRNA, Total-RNA	Fat body culture	(77)
Liverpool strain BioProject accession: PRJNA192626	Sequencing: 2011 Deposited in SRA: 2013-03-07	Lab strain	cDNA prepared with random primers	Whole blood-fed and sugar-fed female mosquitoes	(35)
Liverpool strain Pasteur Institute (Paris, France) BioProject accession: PRJEB23850	Deposited to SRA: 2018-05-03	Lab strain	TruSeq Stranded mRNA sample Prep kit	Larval and adult stages	(78)
Liverpool strain BioProject accession: PRJNA132131	Deposited in SRA: Oct 21, 2010	Lab strain	Total-RNA	Male and female salivary glands	(79)
Liverpool strain GEO accession: GSE24872 BioProject accession: PRJNA132131	Deposited in GEO: 2010-10-21	Lab strain	Total-RNA	Whole female mosquitoes kept on sugar-fed diet versus whole mosquitoes blood-fed	(80)
Liverpool (Black-eyed strain) GEO Accession: GSE53664 BioProject accession: PRJNA232599	Deposited in SRA: 2013-12-26	Lab strain	Total-RNA	Filarial worm infected thorax of female adult mosquitoes	(81)
Liverpool strain BioProject accession: PRJNA255467	Deposited in SRA: 2014-07-30	Lab strain	Total-RNA	Female whole mosquitoes	(82)
Liverpool strain LVP_ib12 BioProject accession: PRJNA209388, PRJNA419241	MR4 BEI 735 Deposited in SRA: 2013-06-27	Lab strain	Total-RNA	Various developmental stages	(83)
Liverpool strain (LVPIB12) BioProject accession: PRJNA236239	BEI Resources/CDC/MR-4 Collection date: Jan-2013 Deposited in SRA: 2014-02-05	Lab strain	Total-RNA	Major peripheral male and female sensory tissues, the brain and (female) ovary.	(84)
Liverpool (Black-eyed strain) BioProject accession: PRJNA503353, PRJNA294263, PRJNA294264, PRJNA294265 and PRJNA294281.	Before 2018 Deposited in SRA: 2018-11-01	Lab strain	Total-RNA, Ribosomal-RNA cleared	Whole adult body	(85)
Liverpool strain (LVP-IB12) BioProject accession: SRP001531	Deposited in SRA: 2009-12-15	Lab strain	Poly-A enriched	Eggs and non-blood fed male and female adults	(86)
Liverpool strain (Strain LVP-IB12, Eggs, MRA-735) BioProject accession: PRJNA595990	Deposited in SRA: 2019-12-16	Lab strain	**mRNA sequencing** TruSeq Stranded mRNA Library Prep Kit	Malpighian tubules were isolated at day 1, day 2, and day 3 following infection by D. immitis and from sugar-fed controls	(87)
Liverpool (Black-eyed strain) NR-48921 BioProject accession: PRJNA595990	Deposited in SRA: 2019-12-16	Lab strain	**mRNA sequencing** TruSeq Stranded mRNA Library Prep Kit	Malpighian tubules were isolated at day 1, day 2, and day 3 following infection by D. immitis and from sugar-fed controls	(87)
Liverpool, kh^w (white eye) BioProject accession: PRJNA261751	Deposited in SRA: 2014-09-22	Reference strain	**mRNA sequencing**	Adult carcass of whole male and female mosquitoes	(88)
Bayer laboratory colony (Likely Liverpool Strain) BioProject accession: PRJNA383480	Unknown Before 2017 Deposited in SRA: 2017-04-19	Lab strain	sRNA	Whole female body	(89)

* Described as wild pools of unidentified mosquitoes, we verified that *Ae. aegypti* were in these mixed samples using COX1 BLASTn similarity.

Table S2. All *Ae. albopictus* samples analysed in this study and associated publications

Colony designation, City and country of original catch	Date of original catch/ Date and generation (g) of sequencing	Wild-caught/ Field derived strain/ Reference strain	Total-RNA or sRNA sequencing	Tissues sequenced	REF
American samples					
Chiapas, Mexico BioProject accession: PRJNA505498	Wild-caught August 2016	Wild-caught	RNAse H/RT rRNA depletion	Female and Male whole	(37)
Gainesville (MRA-804), USA BioProject accession: PRJNA327857	Unknown sequencing Deposited in SRA: 2016-07-05	Field derived strain	Total-RNA	Female midgut and Carcass	(90)
Gainesville (MRA-804), USA BioProject accession: PRJNA232489, PRJNA279095	RNA-Sequencing: September 2012 Deposited in SRA: 2015-03-22	Field derived strain	Total-RNA	Malpighian tubules	(91, 92)
Manassas, USA BioProject accession: PRJNA268379	Manassas, VA, in 2008: Sequencing conducted on F3 laboratory generation 03-Mar-2013 Deposited in SRA: 2014-11-25	Field derived strain	Total RNA	Whole adult mosquitoes	(93)
Manassas, USA BioProject accession: PRJNA71721	Manassas, VA, in 2008 Sequencing conducted on F6 generation June 2010 Deposited in SRA: 2011-11-01	Field derived strain	Total RNA	400 female oocysts	(94)
Manassas, USA BioProject accession: PRJNA158021	Manassas, VA, in 2008 F9 generation 2010 Deposited in SRA: 2012-04-06	Field derived strain	mRNA	Embryos under different conditions	(95)
Manassas, USA BioProject accession: PRJNA187045	Manassas, VA, in 2008 Deposited in SRA: 2012-12-31	Field derived strain	mRNA	Pharate larvae, collected at 11, 21- and 40-days post-oviposition	(96)
Manassas, USA BioProject accession: PRJNA360961	Manassas, VA, in 2008 F7 and F12 generation (2010) Deposited in SRA: 2017-01-11	Field derived strain	sRNA	Pharate Larvae	(97)
Manassas, USA BioProject accession: PRJNA694122 SRA accessions: SRR13521590, SRR13521539	Manassas, VA, in 2008 Deposited in SRA: 2021-01-22	Field derived strain	Total-RNA	Adult males used for sequencing M07 and M06	(98)
New Jersey, USA BioProject accession: PRJNA223166	Unknown origin Deposited in SRA: 2013-10-18	Field derived strain	Total RNA	Female and male reproductive organs	(99)

San Gabriel Valley, CA, USA BioProject accession: PRJNA563095	F_{10} generation used for RNA-Seq experiments Deposited in SRA: 2019-10-16	Field derived strain	mRNA, poly-A enriched	All developmental stages from male and female	(100)
San Gabriel Valley, CA, USA BioProject accession: PRJNA610833	Described as (100) Unknown generation used for sequencing Deposited in SRA: 2020-03-06	Field derived strain	sRNA sequencing	Multiple developmental stages used.	(101)
Wise County, Virginia, USA BioProject accession: PRJNA147359	Wise County, VA, in 2006 Deposited in GEO: Sep 20, 2011	Field derived strain	sRNA	Whole female mosquitoes and head and thorax.	(69)
Wise County, Virginia, United States of America BioProject accession: PRJNA214946	Wise County, VA, in 2006 Deposited in SRA: April 2013	Laboratory strain	sRNA	Pools of 5 females	(68)
Australian/ Asian Samples					
Torres Strait Islands, Australia BioProject accession: PRJNA450281	Unknown wild collection date. Midgut samples collected in 2017 Deposited in SRA: 2018-04-15	Field derived strain	Total-RNA	Head and thorax & midgut of female adults	(102, 103)
Foshan strain, Guangdong, China Housed at the University of Pavia BioProject accession: PRJNA607026	Foshan strain, Guangdong, China and has been established in the laboratory since 1981 Collection date: 2017-07 Submission date: 2020-08-25	Foshan Reference strain	sRNA	Adult female carcasses and ovary pools	(104, 105)
Foshan strain, Guangdong, China BioProject accession: PRJNA577831	Foshan, Guangdong, China and has been established in the laboratory since 1981 Deposited in SRA: 2019-10-16	Foshan Reference strain	mRNA enrichment Oligo (dT) beads	30 female adults per sample	(106)
Foshan strain, Guangdong, China BioProject accession: PRJNA178303	CDC Guangdong, China strain Wild-caught in 1981, Sequencing data deposited in SRA: 2012-10-26	Foshan Reference strain	sRNA	Multiple tissues and samples; Embryo, Larvae, Pupae, Adult male, Sugar-fed Adult female, Blood-fed adult female	(107)
Foshan strain, Guangdong, China BioProject accession: PRJNA275727	CDC Guangdong, China strain Wild-caught in 1981, Deposited in SRA: 2015-02-21	Foshan Reference strain	Total-RNA	Multiple developmental stages: L1-L2 larvae, embryo and male transcriptome	(88)
Foshan strain, Guangdong, China BioProject accession: PRJNA266286	established the laboratory in 1981 Deposited in SRA: 2014-11-04	Foshan Reference strain	Total-RNA, sRNA	Midgut sample data	(108)
Foshan strain, Guangdong, China BioProject accession: PRJNA236401	CDC Guangdong, China strain Wild-caught in 1981, Deposited in SRA 2014-01-25	Foshan Reference strain	sRNA	Pooled midguts and whole mosquitoes	(109, 110)
Foshan strain, Guangdong, China BioProject accession: PRJNA270274	CDC Guangdong, China strain Wild-caught in 1981, Deposited in SRA: 2015-03-06	Foshan Reference strain	Total-RNA	Multiple developmental stages: L1-L2 larvae, embryo and male and egg transcriptome	(111)
Foshan strain, Guangdong, China BioProject accession: PRJNA495114	CDC Guangdong, China strain Wild-caught in 1981, Collection date: 15/03/2018	Foshan Reference strain	Total-RNA	Whole-body adult male and female mosquitoes	(112)
Longgang District, Shenzhen, China BioProject accession: PRJNA475859	Sample collection September 2014, Deposited in SRA: 2018-06-21	Field derived strain	Total-RNA	Individual mosquitoes	(113)
Yunnan, China BioProject Accession: PRJNA472635 SRA accession: SRR7204305	August and September 2016 Deposited in SRA: 2018-05-22	Wild-caught (pools) individually identified	Ribosomal depleted Total-RNA	Whole mosquitoes, "mosquito_virome_3" library annotated as *Anopheles sinensis* but BLASTn and SRA taxonomy analysis revealed majority *Ae. albopictus*	(114)
Yunnan, China BioProject Accession: PRJNA474574 SRA accession: SRR7286979	September and October 2017 Deposited in SRA: 2018-06-05	Wild-caught (pools) individually identified	Ribosomal depleted Total-RNA	Whole mosquitoes	(115)
Zhejiang, China BioProject accession: PRJNA271540 SRA accession: SRR1745767	Collected 2013 Deposited in SRA: 2015-01-04	Wild-caught (pools)	Ribosomal depleted Total-RNA	Whole mosquitoes: Pool of 26 mosquitoes containing: *Aedes albopictus, Armigeres subalbatus, Anopheles paraliae, Anopheles sinensis, Culex pipiens, Culex sp, Culex tritaeniorhynchus*	(116)
Kawasaki, Kanagawa Prefecture Japan BioProject accession: PRJNA587399 SRA accession: SRR11213089, SRR11213090	Wild collected in 2008 45–50 generations of laboratory colonization used Collected: 2015-01 Deposited in SRA: 2020-02-29	Field derived strain	sRNA	Three pools of 20 ovaries, testes or carcasses from the ISV-infected mosquitoes were combined for the generation of small RNA libraries.	(117)
Kuala Lumpur, Malaysia BioProject accession: PRJNA694122	F_0 TROP males Deposited in SRA: 2021-01-22	Field derived strain	Total-RNA	Pooled male (n=9) adult mosquitos	(98)
Phu Hoa, Ben Cat District, Binh Duong Province Vietnam BioProject accession: PRJNA293817	Collected in 2011 Sequencing conducted within 12 generations Deposited in SRA: 2015-08-25	Field derived strain	sRNA	Pools of five whole mosquitoes	(118)
Phu Hoa, Ben Cat District, Binh Duong Province Vietnam BioProject accession: PRJNA587399	Collected: 2011-01-01 Experiments were performed within 16–20 generations Deposited in SRA: 2019-11-04	Field derived strain	sRNA	Three pools of 20 ovaries, testes or carcasses from the ISV-infected mosquitoes were combined for the generation of small RNA libraries.	(117)
European					
Nice, France BioProject accession: PRJNA449278	Mosquitoes collected in August 2011. F3, F11 used for mosquito infections Deposited in SRA: 2018-04-09	Field derived strain	Total RNA Nextera XT library preparation	Oral DENV infection followed by viral amplifications of collected saliva on C6/36 cells	(119)
Athens, Greece BioProject accession: PRJNA282718	collected in Athens (Greece) in 2010; Deposited in SRA: 2015-04-30	Field derived strain	Poly-A	Five to ten larvae in the late third to the early fourth stage were used for RNA extraction	(120)
Rome, Italy BioProject accession: PRJNA314492	Caught in 2012, Collection date: Oct-2012 Deposited in SRA: 2016-03-07	Field derived strain	Total RNA	Female antennae, Female palps, Female bodies, Male heads	(121)
Rimni, Italy BioProject accession: PRJNA493544	Established in 2004 Collection date for RNA-Seq: 16-Nov-2017 Deposited in SRA: 2018-09-27	Field derived strain	Poly-A	RNA was extracted from both the heads and the fat bodies of the pooled mosquitoes	(122)
Ticino, Muzzano Switzerland BioProject accession: PRJNA638077	Collected: August and September 2019 Deposited in SRA: 2020-06-08	Wild-caught	Total RNA	Pool of 40 mosquitoes	(123)

Table S3. Incidence of ISVs in *Aedes aegypti* colonies and wild-caught samples

Colony designation, City and country of original catch and Accession number	AeAV	FoV	PCLV	GMQLV-1	CFAV	HTV	LTLV	RaV	AeBNV-1	ReV	APLV-1	VeV	ATLV-1	ATV	CYV	AOLV-1	TMTLV	REF
African																		
Bakoumba, Gabon BioProject accession: PRJNA386453	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	(1)
Rabai, Kenya (K2) BioProject accession: PRJNA233429	+	-	+	-	-	+	-	+	-	-	+	-	-	+	-	-	-	(2)
Rabai, Kenya (K4) BioProject accession: PRJNA233429	-	-	+	-	-	+	-	+	-	-	+	-	-	+	-	-	-	(2)
Rabai, Kenya (K14) BioProject accession: PRJNA233429	+	-	+	-	-	+	-	-	-	-	+	-	-	-	-	-	-	(2)
Rabai, Kenya (K18) BioProject accession: PRJNA233429	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(2)
Rabai, Kenya (K19) BioProject accession: PRJNA233429	-	-	+	-	-	-	-	-	-	-	-	+	-	+	-	-	-	(2)
Rabai, Kenya (K27) BioProject accession: PRJNA233429	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(2)
Rabai, Kenya K27 x K14 cross colonies (GP, GP2, HP1, HP2) BioProject accession: PRJNA233429	+	-	+	-	-	+	-	-	-	-	+	-	-	-	-	-	-	(2)
Shauri Moyo (Moyo-S/R), Mombasa, Kenya BioProject accession: PRJNA396016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(3)
Bundibugyo (U30), Uganda BioProject accession: PRJNA233429	-	+	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	(2)
Wakiso, Uganda BioProject accession: PRJNA556544	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	(4)
Australian/ Asian Samples																		
Cairns, Queensland, Australia BioProject accession: PRJNA413709	-	-	+	+	+	+	-	-	-	-	+	-	+	+	-	+	-	(5)
Cairns, Queensland, Australia Available on FigShare: https://doi.org/10.26180/5bb0d5ae69035	-	-	+	-	+	+	-	-	-	-	+	-	+	+	-	+	-	(6)
Innisfail, North Queensland, Australia BioProject accession: PRJNA630779	-	-	+	+	-	+	-	-	-	-	+	-	+	+	-	+	-	(8)
Innisfail, Australia BioProject accession: PRJNA545086	-	-	+	+	-	+	-	-	-	-	+	-	+	+	-	+	-	(9)
North Queensland Strain, Australia GEO accession: PRJNA255495	-	-	+	+	+	+	-	-	-	-	+	-	+	+	-	+	-	(7)
Townsville, Queensland, Australia GEO accession: GSE100917 BioProject accession: PRJNA393424	-	-	+	-	+	+	-	-	-	-	+	-	+	+	-	-	-	(10)
Kampong Cham, Cambodia BioProject: PRJNA556544	-	-	+	-	+	+	-	-	-	-	-	-	-	+	-	-	-	(4)
Phnom Penh, Cambodia BioProject: PRJNA556544 SRA accession: SRR9830742	-	-	+	-	+	+	-	-	-	-	-	-	-	+	-	-	-	(4)
Fuzhou, Fujian province, China BioProject accession: PRJNA476690	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(11)
Bora-Bora, French Polynesia BioProject accession: PRJEB15531	+	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-	(12)
Bora-Bora, French Polynesia BioProject accession: PRJEB1859	+	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-	(13, 14)

Bora-Bora, French Polynesia BioProject accession: PRJEB32622	+	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-	(15)
Colony designation, City and country of original catch and Accession number	**AeAV**	**FoV**	**PCLV**	**GMQLV-1**	**CFAV**	**HTV**	**LTLV**	**RaV**	**AeBNV-1**	**ReV**	**APLV-1**	**VeV**	**ATLV-1**	**ATV**	**CYV**	**AOLV-1**	**TMTLV**	**REF**
Toahotu, Tahiti, French Polynesia BioProject accession: PRJNA382618	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(16)
New Delhi, India	-	-	+	-	-	-	-	-	-	-	+	-	+	+	+	-	-	(17)
Xayaboury, Luang Prabang, Vientiane Capital, Saravane, Attapeu Laos BioProject accession: PRJEB37991	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	(18)
Jinjang, Selangor, Malaysia BioProject accession: PRJNA320356	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	(19)
Bangkok, Thailand BioProject accession: PRJNA413709	+	-	+	+	+	+	-	-	+	+	-	+	+	+	-	-	-	(5)
Bangkok, Thailand BioProject accession: PRJNA612326	+	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-	(20)
Kamphaeng Phet, Thailand BioProject accession: PRJNA310013	+	-	+	+	-	+	-	-	+	-	-	-	+	-	-	-	-	(21)
Kamphaeng Phet, Thailand BioProject accession: PRJNA487089	+	-	+	+	+	+	-	-	-	-	+	+	+	-	-	-	-	(22)
Kamphaeng Phet Province, Thailand BioProject accession: PRJNA482553	+	-	-	-	-	+	-	-	-	-	+	-	-	-	-	-	-	(23)
Nakhonsawan, Thailand BioProject accession: PRJEB15531	-	-	+	-	-	+	-	-	+	+	-	-	+	-	-	-	-	(12)
Nakhon Nayok Province, Thailand BioProject accession: PRJNA276135	+	-	+	-	-	+	-	-	-	+	-	+	+	+	-	-	-	(24)
Phetchaburi, Thailand BioProject accession: PRJEB15531	-	-	+	+	+	+	-	-	+	-	-	-	+	-	-	-	-	(12)
Thep Na Korn (KPP), Thailand BioProject accession: PRJNA386455	+	-	+	-	+	+	-	-	-	+	+	+	-	+	-	-	-	(25)
Thep Na Korn (KPP), Thailand BioProject accession: PRJNA540058	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	-	-	(26)
Rayong (T32), Thailand BioProject accession: PRJNA233429	+	-	-	+	-	+	-	-	-	-	-	-	-	+	-	-	-	(2)
Ang Mo Kio, Singapore	-	-	+	-	+	+	-	-	-	-	+	-	+	-	-	-	-	(27)
Ang Mo Kio, Singapore BioProject accession: PRJNA533031	-	-	+	-	+	+	-	-	-	-	+	-	+	-	-	-	-	(28)
American																		
Tapachula, Mexico BioProject accession: PRJNA615972	+	-	+	-	-	+	-	-	-	-	+	-	-	-	-	-	-	(40)
Humaita, Tubiacanga and Belford Roxo, Rio de Janeiro, Brazil BioProject accession: PRJNA277466	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	(29)
Humaita, Tubiacanga and Belford Roxo, Rio de Janeiro, Brazil BioProject accession: PRJNA401335	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	(30)
Nova Iguaçu, Rio de Janeiro, Brazil BioProject accession: PRJNA327841	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	(31)
St-Georges & Cayenne, French Guiana BioProject accession: PRJEB15531	+	-	+	-	+	+	-	-	+	+	-	-	+	+	-	-	-	(12)
Les Abymes & Petit-Bourg, Guadeloupe BioProject accession: PRJNA515586	+	-	+	+	+	+	-	-	-	+	+	-	+	+	-	-	-	(32)

Colony designation, City and country of original catch and Accession number	AeAV	FoV	PCLV	GMQLV-1	CFAV	HTV	LTLV	RaV	AeBNV-1	ReV	APLV-1	VeV	ATLV-1	ATV	CYV	AOLV-1	TMTLV	REF
Chetumal (CTM), Mexico BioProject accession: PRJNA192626	+	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	(33)
Chetumal (CTM), Mexico BioProject accession: PRJNA174376	+	-	-	-	-	-	+	-	-	+	-	-	+	-	-	-	-	(34)
Chetumal (CTM), Mexico BioProject accession: PRJNA147583	+	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	(35)
Chetumal (CTM), Mexico BioProject accession: PRJNA533980	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(36)
Chiapas, Mexico BioProject accession: PRJNA505498	+	-	+	-	-	+	-	-	-	+	+	-	-	-	-	-	-	(37)
Cuernavaca, Mexico BioProject accession: PRJNA301038	+	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	(38)
Poza Rica, Mexico BioProject accession: PRJNA645199	+	-	-	-	-	-	+	-	-	+	-	+	-	-	-	-	-	(39)
Puerto Rico, (wild pools)* BioProject accession: PRJNA307706	+	-	+	-	-	+	-	-	-	+	-	+	+	-	-	-	-	(41)
Curepe, Trinidad BioProject accession: PRJNA476553	+	-	+	-	+	-	-	-	+	+	+	+	-	-	-	-	-	(42)
Curepe, Trinidad BioProject accession: PRJNA396016	+	-	+	-	-	+	-	-	-	+	+	+	-	-	-	-	-	(3)
Galveston, Texas, USA BioProject accession: PRJNA382162, PRJNA399504	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	(43, 44)
Miami, USA (Lab adapted) BioProject accession: PRJNA386859	+	-	-	+	-	+	-	-	+	+	+	+	+	+	-	-	-	(45)
Miami, USA BioProject accession: PRJNA344504	+	-	+	+	+	+	-	-	+	+	+	+	+	+	-	-	-	(46)
Orlando, Florida, USA BioProject accession: PRJEB15531	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(12)
Orlando, Florida, USA BioProject accession: PRJNA487057	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-	(47)
Orlando, Florida, USA BioProject accession: PRJNA148539	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(48)
Key West, Florida, USA BioProject accession: PRJNA487057	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-	(47)
Manatee County, USA BioProject accession: PRJNA547758	+	-	+	+	+	+	-	-	+	+	+	-	+	-	-	-	-	(49)
Reference Ambiguous or Unknown																		
Rexville D (REX-D) Red-eye strain, Puerto Rico BioProject accession: PRJNA401335	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	(30)
Rexville D (REX-D) Red-eye strain, Puerto Rico: BioProject accession: PRJNA192626	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(33)
Rexville D (RexD), Puerto Rico BioProject accession: PRJNA192626	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(35)
Rexville D (RexD), Puerto Rico BioProject accession: PRJNA396016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(3)
Rexville D (RexD) Puerto Rico BioProject accession: PRJNA206074	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(50, 51)
Higgs White Eye (HWE) strain (Variant of Rex-D), Puerto Rico GEO accession: GSE95378 BioProject accession: PRJNA376828	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(52)

Colony designation, City and country of original catch and Accession number	AeAV	FoV	PCLV	GMQLV-1	CFAV	HTV	LTLV	RaV	AeBNV-1	ReV	APLV-1	VeV	ATLV-1	ATV	CYV	AOLV-1	TMTLV	REF
Higgs White Eye (HWE) strain (Variant of Rex-D), Puerto Rico BioProject accession: PRJNA475410	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	(53)
Rockefeller strain (ROCK) BioProject accession: PRJNA396016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(3)
Rockefeller strain BioProject accession: PRJNA525617	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(54)
Rockefeller strain (ROCK) BioProject accession: PRJNA388655	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(55)
Rockefeller strain (ROCK) BioProject accession: PRJNA311123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(56)
Rockefeller strain, (ROCK) BioProject accession: PRJNA379149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(57)
Rockefeller strain (ROCK) BioProject accession: PRJNA54037	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(58)
Rockefeller strain (ROCK) BioProject accession: PRJNA246607	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(59)
Rockefeller (ROCK) (Publication) Liverpool (Metadata) BioProject accession: PRJNA314871	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	(60)
Rockefeller (ROCK) BioProject accession: PRJNA507369	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	(61)
Rockefeller (ROCK) BioProject accession: PRJNA551490	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(62)
UGAL mGFP (transgenic strain) BioProject accession: PRJNA79693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(63)
UGAL/Rockefeller BioProject accession: PRJNA360643	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(64)
UGAL/Rockefeller BioProject accession: PRJNA340082	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(65)
UGAL New Mexico State University BioProject accession: PRJNA246243	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(66)
UGA BioProject accession: PRJNA421500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(67)
UGAL BioProject accession: PRJNA598930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(124)
Liverpool, kh^w (white eye) BioProject accession: PRJNA261751	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	(88)
Liverpool, kh^w (white eye) BioProject accession: PRJNA214946	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	(68)
Liverpool strain BioProject accession: PRJNA147359	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	(69)
Liverpool strain BioProject accession: PRJEB15531	-	-	-	-	+	-	-	-	-	+	-	-	+	-	-	-	-	(12)
Liverpool strain GEO Accession: GSE35161 BioProject accession: PRJNA150789	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	(70)
Liverpool strain BioProject accession: PRJNA232374	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	(71)
Liverpool strain (Tu strain) GEO Accession: GSE34480 BioProject accession: PRJNA151475	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	(72)
Liverpool strain BioProject accession: PRJNA319716	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	(73)
Liverpool strain Colorado State University BioProject accession: PRJNA261799	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	(74)
Liverpool strain BioProject accession: PRJNA356717	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	(75)

Colony designation, City and country of original catch and Accession number	AeAV	FoV	PCLV	GMQLV-1	CFAV	HTV	LTLV	RaV	AeBNV-1	ReV	APLV-1	VeV	ATLV-1	ATV	CYV	AOLV-1	TMTLV	REF
Liverpool strain BioProject accession: PRJNA298592	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-	(76)
Liverpool strain BioProject accession: PRJNA445828	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	(77)
Liverpool strain BioProject accession: PRJNA192626	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(35)
Liverpool strain Pasteur Institute (Paris, France) BioProject accession: PRJEB23850	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-	(78)
Liverpool strain BioProject accession: PRJNA132131	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	(79)
Liverpool strain GEO accession: GSE24872 BioProject accession: PRJNA132131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(80)
Liverpool (Black-eyed strain) GEO Accession: GSE53664 BioProject accession: PRJNA232599	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	(81)
Liverpool strain BioProject accession: PRJNA255467	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	(82)
Liverpool strain LVP_ib12 BioProject accession: PRJNA209388, PRJNA419241	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(83)
Liverpool strain (LVPIB12) BioProject accession: PRJNA236239	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(84)
Liverpool (Black-eyed strain) BioProject accession: PRJNA503353, PRJNA294263, PRJNA294264, PRJNA294265 and PRJNA294281.	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	(85)
Liverpool strain (LVP-IB12) BioProject accession: SAMN00006233	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(86)
Liverpool strain (Strain LVP-IB12, Eggs, MRA-735) Liverpool (Black-eyed strain) NR-48921 BioProject accession: PRJNA595990	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	(87)
Bayer laboratory colony (Likely Liverpool Strain) BioProject accession: PRJNA383480	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	(89)

Legend: AeAV: Aedes aegypti anphevirus, **FoV:** Formosus virus, **GMQLV-1:** Guadeloupe mosquito quaranja-like virus 1, **PCLV:** Phasi Charoen Like virus, **CFAV:** Cell fusing agent virus, **HTV:** Humaita-Tubiacanga virus, **LTLV:** Liverpool tombus-like virus, **RaV:** Rabai virus, **AeBNV-1**: Aedes bi-negev like virus 1, **VeV:** Verdadero virus, **ATLV-1:** Aedes aegypti toti-like virus 1, **ATV:** Aedes aegypti toti virus, **CYV:** Culex Y virus, **AOLV-1:** Aedes orbi-like virus 1

Table S4. Incidence of ISVs in *Aedes albopictus* colonies and wild-caught samples

Colony designation, City and country of original catch	AaAV	SGM	LMCV	APV	AOMV-2	UsV	JMTV	AeFV	AaNLV	AeBNV-2	TMTLV	LTLV	FTBLV	WBLV-4	DANV	NeV	AalDNV-2	CpDNV	REF
American samples																			
Chiapas, Mexico BioProject accession: PRJNA505498	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	(37)
Gainesville (MRA-804), USA BioProject accession: PRJNA327857	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	(90)
Gainesville (MRA-804), USA BioProject accession: PRJNA232489, PRJNA279095	+	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	(91, 92)
Manassas, USA BioProject accession: PRJNA268379	+	-	-	+	-	-	-	-	-	+	+	-	-	+	-	+	-	-	(93)
Manassas, United States of America BioProject accession: PRJNA71721	+	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	-	-	(94)
Manassas, USA BioProject accession: PRJNA158021	+	-	-	+	-	-	-	-	-	-	+	-	-	+	-	-	+	-	(95)
Manassas, USA BioProject accession: PRJNA187045	+	-	-	+	-	-	-	-	-	-	+	-	-	+	-	-	+	-	(96)
Manassas, USA BioProject accession: PRJNA360961	+	-	-	+	-	-	-	-	-	-	+	-	-	+	-	-	-	-	(97)
Manassas, USA BioProject accession: PRJNA694122	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	(98)
New Jersey, USA BioProject accession: PRJNA223166	+	-	-	+	-	-	-	-	-	-	-	-	-	+	-	-	-	-	(99)
San Gabriel Valley, CA, USA BioProject accession: PRJNA563095	+	+	-	+	-	+	-	-	-	-	-	-	-	-	-	+	-	-	(100)
San Gabriel Valley, CA, USA BioProject accession: PRJNA610833	+	+	-	+	-	-	-	-	-	-	-	-	-	-	+	+	-	-	(101)
Wise County, Virginia, USA BioProject accession: PRJNA147359	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	(69)
Wise County, Virginia, USA BioProject accession: PRJNA214946	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	(68)
Australian/ Asian Samples																			
Torres Strait Islands, Australia BioProject accession: PRJNA450281	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	(102, 103)
Foshan strain, Guangdong, China Housed at the University of Pavia BioProject accession:: PRJNA607026	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	-	-	(104, 105)
Foshan strain, Guangdong, China BioProject accession: PRJNA577831	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	(106)
Foshan strain, Guangdong, China BioProject accession: PRJNA178303	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	(107)
Foshan strain, Guangdong, China BioProject accession: PRJNA275727	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	(88)
Foshan strain, Guangdong, China BioProject accession: PRJNA266286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(108)
Foshan strain, Guangdong, China BioProject accession: PRJNA236401	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	+	(109, 110)
Foshan strain, Guangdong, China BioProject accession: PRJNA270274	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	-	-	+	(111)
Foshan strain, Guangdong, China BioProject accession: PRJNA495114	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	+	(112)

Longgang District, Shenzhen, China BioProject accession: PRJNA475859	+	-	+	+	-	-	-	-	+	+	-	-	-	+	-	-	-	-	(113)
Colony designation, City and country of original catch	**AaAV**	**SGM**	**LMCV**	**APV**	**AOMV-2**	**UsV**	**JMTV**	**AeFV**	**AaNLV**	**AeBNV-2**	**TMTLV**	**LTLV**	**FTBLV**	**WBLV-4**	**DANV**	**NeV**	**AaIDNV-2**	**CpDNV**	**REF**
Yunnan, China BioProject accession: PRJNA472635 SRA accession: SRR7204305	+	+	-	+	-	+	-	-	-	-	-	-	-	+	-	-	-	+	(114)
Yunnan, China BioProject accession: PRJNA474574 SRA accession: SRR7286979	-	-	-	-	-	-	-	-	+	-	-	-	-	+	-	-	-	+	(115)
Zhejiang, China BioProject accession: PRJNA271540 SRA accession: SRR1745767	+	-	-	+	+	+	-	-	+	-	-	-	-	+	-	+	-	+	(125)
Kawasaki, Kanagawa Prefecture, Japan BioProject accession: PRJNA587399	+	+	-	-	-	-	-	-	-	-	+	-	-	+	+	-	-	-	(117)
Kuala Lumpur, Malaysia BioProject accession: PRJNA694122	+	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	(98)
Phu Hoa, Binh Duong Province Vietnam BioProject accession: PRJNA293817	-	-	-	+	-	-	-	-	-	-	+	-	-	+	+	-	-	-	(118)
Phu Hoa, Binh Duong Province Vietnam BioProject accession: PRJNA587399	-	-	-	+	-	-	-	-	-	-	+	-	-	+	+	+	-	-	(117)
European																			
Nice, France BioProject accession: PRJNA449278	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-	-	-	(119)
Athens, Greece BioProject accession: PRJNA282718	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(120)
Rome, Italy BioProject accession: PRJNA314492	+	-	-	+	+	-	-	-	-	-	-	-	-	+	-	-	-	-	(121)
Rimini, Italy BioProject accession: PRJNA493544	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	(122)
Ticino, Muzzano Switzerland SRA accession: PRJNA638077	+	+	-	+	+	+	-	-	-	-	-	-	-	+	-	+	-	-	(123)

Legend: SGM: San Gabriel Mononegavirus, **AaAV**: Aedes albopictus Anphevirus (126), **LMCV**: Longgang mosquito chu-like virus, **APV**: Aedes phasma-virus (127), **AOMV-2**: Aedes orthomyxo-like virus 2, **UsV:** Usinis virus, **JMTV:** Jingmen tick virus, **AeFV**: Aedes flavivirus, **AaNLV**: Aedes albopictus negev-like virus (128), **AeBNV-2**: Aedes bi-negev like virus 2, **TMTLV:** Tiger mosquito bi-segmented tombus-like virus, **LTLV:** Liverpool tombus-like virus, **FTBLV:** Foshan tombus-like virus, **WBLV-4:** Wenzhou sobemo-like virus 4, **DANV:** Drosophila American nodavirus, **AaIDNV-2:** Aedes albopictus densovirus 2, **CpDNV:** Culex pipiens densovirus

Table S5. Incidence of ISVs in *Aedes aegypti* and *Aedes albopictus* cell lines

Cell lines	REF	AeAV	SGM	PCLV	AaNLV	CFAV	LTLV	FTLV	TMTLV	AalDNV-2	WSBLV-4	DANV	CYV	CppDNV
Ae. aegypti														
Aag2 PRJEB13078 Total-RNA	(129)	-	-	+	-	+	-	-	-	+	-	-	-	-
Ae. aegypti Aag2 PRJNA238976	(130, 131)	-	-	+	-	+	-	-	-	+	-	-	-	-
Aag2 PRJNA516662 sRNA	(132)	-	-	+	-	+	-	-	-	+	-	-	-	-
Aag2 PRJNA493127 sRNA	(133)	-	-	+	-	+	-	-	-	+	-	-	-	-
Aag2 PRJNA464394 Total-RNA	(134)	-	-	+	-	+	-	-	-	+	-	-	-	-
Aag2 Arthropod Cell Line Initiative (Broad Institute) mRNA		-	-	+	-	+	-	-	-	+	-	-	-	+
Aag2 PRJNA435568	(135)	-	-	+	-	+	-	-	-	+	-	-	-	-
Aag2 PRJNA396680 sRNA	(136)	-	-	+	-	+	-	-	-	+	-	-	-	-
Aag2 PRJNA525601 sRNA	(137)	-	-	+	-	+	-	-	-	+	-	-	-	-
Aag2 PRJNA482553 mRNA	(23)	-	-	+	-	+	-	-	-	+	-	-	+	-
Aag2 PRJEB15203 sRNA	(138)	-	-	+	-	+	-	-	-	+	-	-	+	-
CCL-125 PRJNA147359 sRNA	(69)	+	-	+	-	-	-	-	-	-	-	-	+	-
CCL-125 Arthropod Cell Line Initiative (Broad Institute) mRNA		+	-	-	-	-	-	-	-	-	-	-	-	+
CCL-125 PRJNA610833 sRNA	(101)	+	-	+	-	-	-	-	-	+	+	+	-	-
Ae. albopictus														
C7-10 PRJNA147359 sRNA	(69, 139)	-	-	-	-	-	-	-	-	-	+	-	-	-
C7-10 Arthropod Cell Line Initiative (Broad Institute) mRNA		-	-	-	-	-	-	-	-	+	+	-	-	-
C7-10 PRJNA610833 SRR11252295	(101)	-	-	+	-	-	-	-	-	-	-	+	-	-
C7-10 PRJNA147359 sRNA	(69)	-	-	-	-	-	-	-	-	-	+	-	-	-
U4.4 Arthropod Cell Line Initiative (Broad Institute) mRNA		-	-	-	-	-	-	-	-	-	-	-	-	+
U4.4 PRJNA464394 Total-RNA	(134)	-	-	-	-	-	-	-	-	-	-	-	+	-
U4.4 PRJNA610833 SRR11252301 sRNA	(101)	-	-	-	-	-	-	-	-	-	-	-	+	-
U4.4 PRJNA559096 sRNA	(140)	-	-	-	-	-	-	-	-	-	-	-	+	-
U4.4 PRJEB15203 sRNA	(138)	-	-	-	-	-	-	-	-	-	-	-	+	-
U4.4 SRP062828 sRNA	(118)	-	-	-	-	-	-	-	-	-	-	+	+	-

U4.4 PRJNA525601	(137)	-	-	+	-	-	-	-	-	-	-	-	+	-
Cell lines	**REF**	**AeAV**	**SGM**	**PCLV**	**AaNLV**	**CFAV**	**LTLV**	**FTLV**	**TMTLV**	**AalDNV-2**	**WSBLV-4**	**DANV**	**CYV**	**CppDNV**
C6/36 PRJNA464394 Total-RNA	(134)	-	-	-	-	-	-	-	-	-	-	-	-	-
C6/36 PRJNA436549 mRNA	(141)	-	-	-	-	-	-	-	-	-	-	-	-	-
C6/36 PRJNA610833: SRR11252294 sRNA	(101)	-	-	+	-	-	-	-	-	+	+	+	-	-
C6/36 PRJNA610833: SRR11252293 sRNA	(101)	-	-	+	-	-	-	-	-	+	-	-	-	-
C6/36 PRJNA556544 vRNA	(4)	-	-	-	-	-	-	-	-	+	-	+	-	-
C6/36 PRJNA703391 mRNA	(142)	-	-	-	-	-	-	-	-	-	-	-	-	-
C6/36 PRJNA516868 mRNA	(143)	-	-	-	-	-	-	-	-	-	-	-	-	-
C6/36 PRJNA503588 vRNA	(26)	-	-	-	-	-	-	-	+	+	-	+	-	-
C6/36 PRJNA540058 vRNA	(26)	-	-	-	-	-	-	-	+	+	-	+	-	-
C6/36 PRJNA565571 mRNA	(144)	-	-	-	-	-	-	-	-	-	-	-	+	-
C6/36 PRJNA449278 mRNA	(119)	-	-	-	-	-	-	-	+	+	-	+	-	-
C6/36 PRJNA430004 mRNA	(145)	-	-	-	-	-	-	-	-	-	-	+	-	-
C6/36 PRJNA345486 mRNA	(146)	-	-	-	-	-	-	-	-	-	-	-	-	-
C6/36 PRJNA525601	(137)	-	-	-	-	-	-	-	-	-	-	-	-	-
C6/36 PRJNA374578 sRNA	(147)	-	-	-	-	-	-	-	-	-	-	-	-	+
C6/36 SRP062828 sRNA	(118)	-	-	-	-	-	-	-	-	-	-	+	+	-
C6/36 PRJNA147359 sRNA	(69)	-	-	-	-	-	+	+	-	+	-	-	-	-
***Wolbachia* infected *Aedes* cells**														
Ae. albopictus wAlbB Aa23 PRJNA670506	(148)	+	+	-	+	-	-	-	-	+	+	-	-	-
Ae. albopictus RML-12.wMelPop PRJNA227164	(149)	+	+	+	-	-	-	-	-	-	+	-	-	-
Ae. albopictus C6/36.wMelPop PRJNA516868, PRJNA266744	(143, 150)	+	+	+	-	-	-	-	-	-	+	-	-	-
Ae. aegypti Aag2.wMelPop PRJNA238976	(130, 131)	+	+	+	-	-	-	-	-	+	+	-	-	-
Ae. aegypti wAlbB PRJNA670506	(148)	+	+	+	+	-	-	-	-	+	-	-	-	-

Legend: **AeAV:** Aedes aegypti anphevirus, **SGM:** San Gabriel Mononegavirus **PCLV:** Phasi Charoen Like virus, **AaNLV:** Aedes albopictus negev-like virus, **CFAV:** Cell fusing agent virus, **LTLV:** Liverpool tombus-like virus, **FTBLV:** Foshan tombus-like virus, **TMTLV:** Tiger mosquito bi-segmented tombus-like virus, **AalDNV-2**: Aedes albopictus densovirus, **WSBL-4:** Wenzhou-Sobemo like virus 4, **DANV:** Drosophila American nodavirus, **CYV:** Culex Y virus, **CpDNV:** Culex pipiens densovirus

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