

| | M422 | M287 | M138 | M317B | M211B | KM151 | KM174 | Aedes flavivirus NC_012932 | Aedes flavivirus KJ741266 | Cell fusing agent virus KP792624 | Aedes tricholabis flavivirus KM088042 | Kamiti River virus NC_005064 | Mac peak virus NC_035187 | Karumba virus MF352615 | Dairy Swamp virus MF352618 | Haslams Creek virus MF352617 | Parramatta River virus KT192549 | Hanko virus JQ268258 | Ochlerotatus caspius flavivirus HF548540 | Palm Creek virus KC505248 | Nakiwogo virus GQ165809 | Cuacua virus KX245154 | Nienokoue virus NC_024299 | Culex flavivirus NC_008604 | QuangBinh virus NC_012671 | Rio Bravo virus JQ582840 | Modoc virus NC_003635 | Japanese encephalitis virus NC_001437 | Usutu virus NC_006551 | Chaoyang virus JQ068102 | Lammi virus KC692068 |
|--|------|------|------|-------|-------|-------|-------|----------------------------|---------------------------|----------------------------------|---------------------------------------|------------------------------|--------------------------|------------------------|----------------------------|------------------------------|---------------------------------|----------------------|--|---------------------------|-------------------------|-----------------------|---------------------------|----------------------------|---------------------------|--------------------------|-----------------------|---------------------------------------|-----------------------|-------------------------|----------------------|
| M422 | | 99% | 99% | 55% | 55% | 55% | 55% | 59% | 59% | 58% | 56% | 61% | 59% | 63% | 63% | 62% | 59% | 56% | 59% | 70% | 72% | 94% | 70% | 60% | 64% | 49% | 48% | 44% | 45% | 46% | 49% |
| M287 | 99% | | 100% | 55% | 55% | 55% | 55% | 59% | 59% | 59% | 56% | 62% | 60% | 63% | 64% | 63% | 59% | 56% | 59% | 70% | 72% | 94% | 70% | 60% | 64% | 50% | 49% | 44% | 45% | 47% | 49% |
| M138 | 99% | 100% | | 55% | 55% | 55% | 55% | 59% | 59% | 58% | 56% | 62% | 59% | 63% | 64% | 63% | 60% | 56% | 59% | 70% | 72% | 95% | 70% | 60% | 64% | 50% | 49% | 44% | 45% | 47% | 49% |
| M317B | 55% | 55% | 55% | | 100% | 100% | 100% | 72% | 72% | 67% | 67% | 75% | 54% | 55% | 60% | 54% | 56% | 58% | 58% | 59% | 63% | 54% | 57% | 51% | 55% | 44% | 45% | 40% | 43% | 47% | 43% |
| M211B | 55% | 55% | 55% | 100% | | 100% | 100% | 72% | 72% | 67% | 67% | 75% | 54% | 55% | 60% | 54% | 56% | 58% | 58% | 59% | 63% | 54% | 57% | 51% | 55% | 44% | 45% | 40% | 43% | 47% | 43% |
| KM151 | 55% | 55% | 55% | 100% | 100% | | 100% | 72% | 72% | 67% | 67% | 75% | 54% | 55% | 60% | 54% | 56% | 58% | 58% | 59% | 63% | 54% | 57% | 51% | 55% | 44% | 45% | 40% | 43% | 47% | 43% |
| KM174 | 55% | 55% | 55% | 100% | 100% | 100% | | 72% | 72% | 67% | 67% | 75% | 54% | 55% | 60% | 54% | 56% | 58% | 58% | 59% | 63% | 54% | 57% | 51% | 55% | 44% | 45% | 40% | 43% | 47% | 43% |
| Aedes flavivirus NC_012932 | 59% | 59% | 59% | 72% | 72% | 72% | 72% | | 91% | 70% | 68% | 71% | 59% | 57% | 59% | 60% | 59% | 61% | 62% | 61% | 62% | 56% | 55% | 55% | 56% | 44% | 47% | 42% | 43% | 46% | 46% |
| Aedes flavivirus KJ741266 | 59% | 59% | 59% | 72% | 72% | 72% | 72% | 91% | | 70% | 71% | 74% | 59% | 57% | 61% | 61% | 56% | 60% | 60% | 62% | 62% | 57% | 58% | 51% | 57% | 44% | 47% | 43% | 45% | 45% | 44% |
| Cell fusing agent virus KP792624 | 58% | 59% | 58% | 67% | 67% | 67% | 67% | 70% | 70% | | 74% | 73% | 60% | 59% | 59% | 59% | 63% | 59% | 59% | 59% | 65% | 56% | 59% | 56% | 53% | 44% | 46% | 44% | 43% | 47% | 45% |
| Aedes tricholabis flavivirus KM088042 | 56% | 56% | 56% | 67% | 67% | 67% | 67% | 68% | 71% | 74% | | 75% | 57% | 60% | 59% | 60% | 64% | 61% | 61% | 60% | 60% | 56% | 61% | 52% | 55% | 42% | 44% | 44% | 43% | 43% | 44% |
| Kamiti River virus NC_005064 | 61% | 62% | 62% | 75% | 75% | 75% | 75% | 71% | 74% | 73% | 75% | | 59% | 61% | 62% | 60% | 61% | 58% | 59% | 65% | 64% | 60% | 62% | 55% | 59% | 46% | 43% | 46% | 48% | 47% | 45% |
| Mac peak virus NC_035187 | 59% | 60% | 59% | 54% | 54% | 54% | 54% | 59% | 59% | 60% | 57% | 59% | | 75% | 76% | 76% | 63% | 63% | 65% | 58% | 60% | 59% | 63% | 64% | 58% | 49% | 47% | 47% | 46% | 47% | 47% |
| Karumba virus MF352615 | 63% | 63% | 63% | 55% | 55% | 55% | 55% | 57% | 57% | 59% | 60% | 61% | 75% | | 74% | 75% | 64% | 61% | 62% | 59% | 63% | 64% | 68% | 63% | 64% | 49% | 45% | 48% | 43% | 42% | 46% |
| Dairy Swamp virus MF352618 | 63% | 64% | 64% | 60% | 60% | 60% | 60% | 59% | 61% | 59% | 59% | 62% | 76% | 74% | | 81% | 62% | 60% | 63% | 57% | 63% | 61% | 67% | 57% | 58% | 48% | 46% | 44% | 44% | 42% | 43% |
| Haslams Creek virus MF352617 | 62% | 63% | 63% | 54% | 54% | 54% | 54% | 60% | 61% | 59% | 60% | 60% | 76% | 75% | 81% | | 62% | 62% | 62% | 60% | 64% | 62% | 67% | 61% | 59% | 47% | 48% | 46% | 42% | 42% | 43% |
| Parramatta River virus KT192549 | 59% | 59% | 60% | 56% | 56% | 56% | 56% | 59% | 56% | 63% | 64% | 61% | 63% | 64% | 62% | 62% | | 75% | 77% | 57% | 56% | 57% | 62% | 61% | 54% | 48% | 49% | 46% | 46% | 43% | 48% |
| Hanko virus JQ268258 | 56% | 56% | 56% | 58% | 58% | 58% | 58% | 61% | 60% | 59% | 61% | 58% | 63% | 61% | 60% | 62% | 75% | | 89% | 62% | 57% | 54% | 59% | 56% | 57% | 51% | 50% | 45% | 49% | 49% | 47% |
| Ochlerotatus caspius flavivirus HF548540 | 59% | 59% | 59% | 58% | 58% | 58% | 58% | 62% | 60% | 59% | 61% | 59% | 65% | 62% | 63% | 62% | 77% | 89% | | 55% | 56% | 56% | 57% | 55% | 56% | 49% | 50% | 44% | 47% | 49% | 48% |
| Palm Creek virus KC505248 | 70% | 70% | 70% | 59% | 59% | 59% | 59% | 61% | 62% | 59% | 60% | 65% | 58% | 59% | 57% | 60% | 57% | 62% | 55% | | 72% | 69% | 66% | 61% | 63% | 50% | 48% | 43% | 45% | 47% | 46% |
| Nakiwogo virus GQ165809 | 72% | 72% | 72% | 63% | 63% | 63% | 63% | 62% | 62% | 65% | 60% | 64% | 60% | 63% | 63% | 64% | 56% | 57% | 56% | 72% | | 70% | 68% | 63% | 65% | 51% | 49% | 44% | 45% | 45% | 49% |
| Cuacua virus KX245154 | 94% | 94% | 95% | 54% | 54% | 54% | 54% | 56% | 57% | 56% | 56% | 60% | 59% | 64% | 61% | 62% | 57% | 54% | 56% | 69% | 70% | | 69% | 60% | 64% | 51% | 48% | 44% | 43% | 46% | 48% |
| Nienokoue virus NC_024299 | 70% | 70% | 70% | 57% | 57% | 57% | 57% | 55% | 58% | 59% | 61% | 62% | 63% | 68% | 67% | 67% | 62% | 59% | 57% | 66% | 68% | 69% | | 62% | 69% | 50% | 49% | 48% | 45% | 44% | 46% |
| Culex flavivirus NC_008604 | 60% | 60% | 60% | 51% | 51% | 51% | 51% | 55% | 51% | 56% | 52% | 55% | 64% | 63% | 57% | 61% | 61% | 56% | 55% | 61% | 63% | 60% | 62% | | 70% | 49% | 42% | 43% | 44% | 46% | 44% |
| QuangBinh virus NC_012671 | 64% | 64% | 64% | 55% | 55% | 55% | 55% | 56% | 57% | 53% | 55% | 59% | 58% | 64% | 58% | 59% | 54% | 57% | 56% | 63% | 65% | 64% | 69% | 70% | | 53% | 46% | 42% | 43% | 44% | 44% |
| Rio Bravo virus JQ582840 | 49% | 50% | 50% | 44% | 44% | 44% | 44% | 44% | 44% | 44% | 42% | 46% | 49% | 49% | 48% | 47% | 48% | 51% | 49% | 50% | 51% | 51% | 50% | 49% | 53% | | 66% | 56% | 61% | 51% | 52% |
| Modoc virus NC_003635 | 48% | 49% | 49% | 45% | 45% | 45% | 45% | 47% | 47% | 46% | 44% | 43% | 47% | 45% | 46% | 48% | 49% | 50% | 50% | 48% | 49% | 48% | 49% | 42% | 46% | 66% | | 61% | 57% | 53% | 57% |
| Japanese encephalitis virus NC_001437 | 44% | 44% | 44% | 40% | 40% | 40% | 40% | 42% | 43% | 44% | 44% | 46% | 47% | 48% | 44% | 46% | 46% | 45% | 44% | 43% | 44% | 44% | 48% | 43% | 42% | 56% | 61% | | 73% | 57% | 65% |
| Usutu virus NC_006551 | 45% | 45% | 45% | 43% | 43% | 43% | 43% | 43% | 45% | 43% | 43% | 48% | 46% | 43% | 44% | 42% | 46% | 49% | 47% | 45% | 45% | 43% | 45% | 44% | 43% | 61% | 57% | 73% | | 64% | 64% |
| Chaoyang virus JQ068102 | 46% | 47% | 47% | 47% | 47% | 47% | 47% | 46% | 45% | 47% | 43% | 47% | 47% | 42% | 42% | 42% | 43% | 49% | 49% | 47% | 45% | 46% | 44% | 46% | 44% | 51% | 53% | 57% | 64% | | 82% |
| Lammi virus KC692068 | 49% | 49% | 49% | 43% | 43% | 43% | 43% | 46% | 44% | 45% | 44% | 45% | 47% | 46% | 43% | 43% | 48% | 47% | 48% | 46% | 49% | 48% | 46% | 44% | 44% | 52% | 57% | 65% | 64% | 82% | |

Figure S1: Classical Insect specific flaviviruses (cISFs) distance matrix. Distance matrix of the partial RdRp gene showing of representative viruses and samples sequenced in the present study (red). Light grey to dark shades represent nucleotide distances.