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Yellow Fever Virus in Mosquitoes from Rainforest Bordering Manaus, Brazil, 2022

Appendix

Materials and Methods

Mosquito collections

Mosquitoes were sampled from May 2021 to June 2022 at the Adolpho Ducke Forest Reserve, comprising 100 km^2 of primary rainforest bordering the city of Manaus in Amazonas State, Brazil (Appendix Figure 1, panels A and B). Sampling at each site occurred at ground level and on a five-meter platform to capture approaching mosquitoes using hand-nets and aspirators between 10:00 and 15:00 as part of ongoing studies investigating mosquito communities at forest edges (*1*,*2*). Mosquitoes were separated into 50 mL Falcon tubes at 30-minute intervals and tubes containing live mosquitoes were placed in a Styrofoam box in the shade to prevent desiccation until they were transferred to a −80°C freezer at the Fundação de Medicina Tropical Doutor Heitor Vieira Dourado (FMT-HVD) at the end of each day. Mosquitoes were then placed on a chill table (BioQuip, Rancho Dominguez, California, USA), morphologically identified by using a stereomicroscope and relevant taxonomic keys (*3*–*9*) and stored at −80°C until screened for the presence of viruses. Mosquito collections were approved by local environmental authorities (SISBIO license 57003–6, approved on 03.09.2020).

Homogenization of mosquito pools

Female *Haemagogus* species mosquitoes were grouped in pools of up to *10 individuals* by species, date of collection, sampling site, height, and time of collection.

Pools were macerated in 0.5 mL of phosphate-buffered saline (PBS) 1X (GIBCO, USA) supplemented with 2% penicillin-streptomycin, 1% amphotericin B, with one 5 mm stainless steel bead (Loccus, Brazil) per pool, which was shaken by using the L-BEADER 6 (Loccus,

Brazil) for three 30 second cycles at 3000 rpm. The macerated samples were centrifuged at 10,000 rpm for ten minutes, and the supernatants were transferred to a new 1.5 mL microtube.

Cell maintenance

The following cells from the American Type Culture Collection (ATCC) (Maryland, USA) were used: Vero and C6/36. The Vero cells are a continuous lineage of cells obtained by transforming green monkey kidney epithelial cells. They were grown in MEM (Eagle's Minimum Essential Medium) supplemented with 10% FBS (fetal bovine serum), containing gentamicin (50 ug/mL), penicillin (100 µL/mL) and amphotericin B (5 ug/mL), in an oven with a 5% CO^2 atmosphere at 37°C. The C6/36 cells are a lineage of epithelial cells from *Aedes albopictus* mosquito larvae. They were grown in Leibowitz-15 (L-15) medium (Cultilab, BRL), supplemented with 10% SFB, and containing 100 U/mL penicillin, 50 ug/mL streptomycin, and 2 ug/mL fungizone (Cultilab, USA). The C6/36 cells were kept in a BOD (biologic oxygen demand) incubator at 28°C.

Virus screening

A total of 300 µL of the macerated supernatants were filtered by using 0.22 µm filters attached to a 3 mL syringe, and 100 µL were inoculated per well in a 24-well plate of confluent C6/36 and Vero cells monolayers for viral isolation. The C6/36 and Vero cells were propagated and maintained in MEM or Leibowitz L-15 medium (GIBCO, USA), respectively, supplemented with 10% heat-inactivated fetal bovine serum (FBS) and 1% penicillin-streptomycin (GIBCO, USA). The adsorption period for the samples inoculated into C6/36 cells was 120 minutes, and for Vero cells, 90 minutes, rocking the plate every 15 minutes (mechanical spread of viruses over cell culture monolayers). After the adsorption period, MEM culture medium containing 1% inactivated FBS was added for Vero, and L-15 culture medium containing 2% inactivated FBS was added to C6/36 cells. The cells were incubated and observed for 7 days at 28°C (C6/36) and 37°C (Vero), respectively. After this period or when presenting a cytopathic effect, the cell culture supernatant was harvested and kept at −70°C until RNA extraction.

In parallel to in cellulo isolation, a total of 140 µL of the macerated supernatants were submitted to total RNA extraction using QIAamp Viral RNA Mini kit (Qiagen, USA), according to the manufacturer's instructions, followed by reverse transcription-quantitative polymerase chain reaction (RT-qPCR) using GoTaq 1-Step RT-qPCR System (Promega, USA) and primers

and probes targeting the 5′ non-coding region of YFV genome at a concentration of 10µM (Appendix Table 1) (*10*). The amplification protocol consisted of an initial reverse transcription step at 45°C for 15 minutes, denaturation at 95°C for 2 minutes and 40 subsequent amplification cycles, consisting of 15 seconds at 95°C for denaturation and 1 minute at 60°C for annealing and extension. The RT-qPCR was performed on the QuantStudio 3 Real-Time PCR System (Thermo Fisher Scientific, USA), and the results were analyzed on the QuantStudio 3 v1.5.1 software (Thermo Fisher Scientific,). Results were interpreted as positive if the cycle quantification threshold (Ct) value was ≤37.

DNA Barcoding

In the positive samples, we confirmed the mosquito genus by DNA barcoding (*11*), using primers targeting the mitochondrial cytochrome c oxidase subunit I from diverse metazoan invertebrates at a concentration of 10µM (Appendix Table 2). Amplification was performed using Gotaq Hot Start Colorless Master Mix (Promega, USA) under the following thermal cycling conditions: initial denaturation at 95°C for 2 minutes, followed by 40 cycles of denaturation at 95°C for two minutes, annealing at 55°C for 1 minute, and extension at 72°C for 1 minute. A final extension was performed at 72°C for 5 minutes and the reaction was held at 4°C.

The endpoint PCR products were separated in 1.5% agarose gel in 1X TBE buffer and the gel was visualized on an ultraviolet (UV) light transilluminator. The fragments of interest were excised from the agarose and purified using the Wizard SV Gel and PCR Clean-Up System kit (Promega, USA). Purified products were subjected to sequencing reactions using the BigDye kit (Applied Biosystems, USA) and reconstituted in formamide. Sequencing was performed by capillary electrophoresis with the Sanger method *(12)* on an ABI 3130 Genetic Analyzer (Applied Biosystems).

The three mosquito sequences were analyzed using the Barcode of Life Data System (BOLD) (https://boldsystems.org). Additionally, a distance matrix analysis was performed by comparing these sequences to the complete mitochondrial genome of *Haemagogus janthinomys* (NC_028025.1).

Genome sequencing and assembly

The cDNA synthesis, YFV genome amplification, and library preparation were carried out using Illumina CovidSeq Test (Illumina Inc, USA) following the instructions provided, and adapted with a previously published primer panel for yellow fever virus South American genotype I (*13*). Sequencing was implemented on the Illumina MiSeq System (Illumina Inc, USA), using a MiSeq Reagent Kit v2 (2 × 150 bp cycles) (Illumina Inc, USA).

The raw sequencing data trimming was performed using Geneious Prime v. 2021.1 to filter low-quality bases, primer sequences, adapters, and reads with a minimal length of 75 bp (bp). The cleaned paired-end reads were assembled by de novo methodology using Spades v.3.15.4 (*14*). Contigs were mapped to reference (NC_002031).

Genotyping and phylogenetic analysis

Genotyping was conducted using the yellow fever typing tool available at (https://genomedetective.com/typingtool/yellowfever/). The whole genome sequence generated was combined with a total of 615 complete genomic YFV sequences retrieved from GenBank. Sequences were aligned by using MAFFT (*15*) and edited by using AliView (*16*). A maximum likelihood (ML) phylogeny tree was estimated by using IQ-TREE 2 (*17*) under the best-fit substitution model (GTR+F+I+G4) inferred by the ModelFinder application implemented in IQ-TREE2 (*18*) according to Bayesian Information Criterion (BIC). Statistical support for tree nodes was estimated using a ML bootstrap with 1,000 replicates. Visualization was performed using R software v.4.0.1.

YFV Infection Rates in Mosquito Pools

PoolTestR was used to estimate YFV infection rates in uneven sized pools of *Haemagogus* mosquitoes. Results are given as a Maximum Likelihood Estimate of the number of infected mosquitoes per 1,000 individuals with 95% confidence intervals calculated using a Likelihood Ratio Method (*19*).

Data availability

The sequences obtained in this study are available in GenBank database under accession numbers of: PQ247125-PQ247127 (COI), and PQ276810-PQ276812 (YFV).

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Appendix Table 1. Primers and probes for YFV RT-qPCR.

Primer/probe	Sequence (5′-3′)	Position[a]
YFallF	5′-GCTAATTGAGGTGYATTGGTCTGC-3′	15–38
YFallR	5′-CTGCTAATCGCTCAAMGAACG-3′	83–103
YFallP	5′-HEX-ATCGAGTTGCTAGGCAATAAACAC-TMR-3′	41–64

[a]Positions are indicated relative to GenBank sequence AY640589.1.

Appendix Table 2. Primers for mitochondrial cytochrome c oxidase subunit I from diverse metazoan invertebrates.

Primer	Sense	Sequence (5′-3′)	Size (bp)
LCO1490	Forward	GGTCAACAAATCATAAAGATATTGG	710
HC02198	Reverse	TAAACTTCAGGGTGACCAAAAAATCA	710

Appendix Table 3. Yellow fever virus genome sequences used in the phylogenetic analysis.

GenBank Acession	Country	Year	Source	GenBank Acession	Country	Year	Source
OP508690.1	Brazil	2021	Alouatta sp	**MH484430.1**	Brazil	2017	Callithrix sp
OP508660.1	Brazil	2021	Alouatta sp	**MF170971.1**	Brazil	2017	New World monkey
OP508668.1	Brazil	2021	Alouatta sp	**MH018115.1**	Brazil	2017	Non-human primate
MZ712144.1	Brazil	2021	Alouatta guariba clamitans	**MK333804.1**	Brazil	2015	Sapajus libidinosus
OP508691.1	Brazil	2021	Alouatta sp	**MK728873.1**	Brazil	2017	Homo sapiens
MZ712134.1	Brazil	2021	Alouatta guariba clamitans	**ON022275.1**	Brazil	2018	Homo sapiens
MZ712133.1	Brazil	2021	Alouatta guariba clamitans	**ON022274.1**	Brazil	2018	Homo sapiens
MZ712143.1	Brazil	2021	Alouatta guariba clamitans	**ON022238.1**	Brazil	2017	Non-human primate
MZ712140.1	Brazil	2021	Alouatta guariba clamitans	**ON022239.1**	Brazil	2018	Homo sapiens
MZ712132.1	Brazil	2021	Alouatta guariba clamitans	**ON022276.1**	Brazil	2018	Homo sapiens
MZ712127.1	Brazil	2021	Alouatta guariba clamitans	**MK333809.1**	Brazil	2018	Haemagogus janthinomys
MZ712146.1	Brazil	2021	Alouatta guariba clamitans	**MK333807.1**	Brazil	2018	Haemagogus leucocelaenus
OP508655.1	Brazil	2021	Alouatta sp	**ON502416.1**	Brazil	2018	Homo sapiens
OP508659.1	Brazil	2021	Alouatta sp	**MK333806.1**	Brazil	2018	Haemagogus janthinomys
OP508672.1	Brazil	2021	Alouatta sp	**ON022242.1**	Brazil	2018	Homo sapiens
OP508657.1	Brazil	2021	NA	**MN506290.1**	Brazil	2018	Haemagogus janthinomys
MZ712130.1	Brazil	2021	Alouatta guariba clamitans	**ON022271.1**	Brazil	2018	Homo sapiens
MZ712128.1	Brazil	2021	Alouatta guariba clamitans	**ON022270.1**	Brazil	2018	Homo sapiens
MZ712129.1	Brazil	2021	Alouatta guariba clamitans	**MN643077.1**	Brazil	2018	Homo sapiens
MZ712138.1	Brazil	2021	Alouatta guariba clamitans	**ON022508.1**	Brazil	2018	Homo sapiens
MZ712131.1	Brazil	2021	Alouatta guariba clamitans	**ON022498.1**	Brazil	2018	Homo sapiens
OP508709.1	Brazil	2021	Alouatta guariba clamitans	**ON022729.1**	Brazil	2018	Homo sapiens
OP508697.1	Brazil	2021	Alouatta sp	**ON022483.1**	Brazil	2018	Homo sapiens
OP508682.1	Brazil	2019	Alouatta sp	**ON022476.1**	Brazil	2018	Homo sapiens
OP508699.1	Brazil	2021	Alouatta sp	**ON022492.1**	Brazil	2018	Homo sapiens
OP508693.1	Brazil	2021	Alouatta sp	**ON022506.1**	Brazil	2018	Homo sapiens
OP508683.1	Brazil	2021	Alouatta sp	**ON022500.1**	Brazil	2018	Homo sapiens
OP508689.1	Brazil	2021	Alouatta sp	**ON022448.1**	Brazil	2018	Callithrix
OP508679.1	Brazil	2021	Alouatta sp	**ON022420.1**	Brazil	2017	Alouatta caraya
MZ712147.1	Brazil	2021	Alouatta sp	**ON022424.1**	Brazil	2017	Alouatta guariba clamitans
MZ712148.1	Brazil	2021	Alouatta guariba clamitans	**MN643080.1**	Brazil	2018	Homo sapiens
MZ712137.1	Brazil	2021	Alouatta guariba clamitans	**MN506265.1**	Brazil	2017	Haemagogus janthinomys
MZ712149.1	Brazil	2021	Alouatta guariba clamitans	**ON022240.1**	Brazil	2018	Alouatta sp
OP508685.1	Brazil	2021	Alouatta sp	**MN643078.1**	Brazil	2018	Homo sapiens
OP508704.1	Brazil	2021	Alouatta sp	**MN604284.1**	Brazil	2017	Homo sapiens
OP508686.1	Brazil	2021	Alouatta sp	**ON022471.1**	Brazil	2018	Homo sapiens
OP508680.1	Brazil	2021	Alouatta sp	**ON022450.1**	Brazil	2018	Callithrix
OP508702.1	Brazil	2021	Alouatta sp	**MK882619.1**	Brazil	2018	Homo sapiens
OP508695.1	Brazil	2021	Alouatta sp	**ON022280.1**	Brazil	2017	Alouatta sp
OP508677.1	Brazil	2021	Alouatta sp	**MK882604.1**	Brazil	2017	Homo sapiens
OP508674.1	Brazil	2021	Alouatta sp	**MN643079.1**	Brazil	2018	Homo sapiens

GenBank Acession	Country	Year	Source	GenBank Acession	Country	Year	Source
OP508700.1	Brazil	2020	Alouatta sp	**ON022281.1**	Brazil	2017	Alouatta sp
OP508692.1	Brazil	2021	Alouatta sp	**MF423377.2**	Brazil	2017	Alouatta guariba clamitans
OP508678.1	Brazil	2021	Alouatta sp	**MF538785.2**	Brazil	2017	marmoset
OP508684.1	Brazil	2021	Alouatta sp	**MF370548.1**	Brazil	2017	Alouatta sp
OP508705.1	Brazil	2021	Alouatta sp	**MF170975.1**	Brazil	2017	Homo sapiens
OP508713.1	Brazil	2021	Alouatta sp	**MK882610.1**	Brazil	2017	NA
OP508646.1	Brazil	2020	Alouatta sp	**MF423373.2**	Brazil	2017	Haemagogus leucocelaenus
OP508698.1	Brazil	2021	Alouatta sp	**MF423378.2**	Brazil	2017	Alouatta guariba clamitans
MZ712139.1	Brazil	2021	Alouatta guariba clamitans	**MN506291.1**	Brazil	2017	Haemagogus janthinomys
OP508648.1	Brazil	2020	Alouatta sp	**MN506285.1**	Brazil	2018	Haemagogus janthinomys
OP508638.1	Brazil	2020	Alouatta sp	**MN506284.1**	Brazil	2018	Haemagogus janthinomys
OP508606.1	Brazil	2020	Alouatta sp	**MN506289.1**	Brazil	2018	Haemagogus janthinomys
OP508619.1	Brazil	2020	Alouatta sp	**MN506287.1**	Brazil	2018	Haemagogus janthinomys
OP508645.1	Brazil	2020	Alouatta sp	**MN506286.1**	Brazil	2018	Haemagogus janthinomys
OP508636.1	Brazil	2020	Alouatta sp	**MK882618.1**	Brazil	2018	Homo sapiens
OP508701.1	Brazil	2021	Alouatta sp	**MN506288.1**	Brazil	2018	Haemagogus janthinomys
OP508707.1	Brazil	2021	Alouatta sp	**ON022439.1**	Brazil	2017	Alouatta sp
OP508676.1	Brazil	2019	Alouatta sp	**ON022382.1**	Brazil	2017	Alouatta caraya
OP508710.1	Brazil	2021	Alouatta sp	**ON022264.1**	Brazil	2017	Callithrix penicillata
OP508670.1	Brazil	2021	Alouatta sp	**ON022513.1**	Brazil	2018	Homo sapiens
OP508669.1	Brazil	2021	Alouatta sp	**ON022494.1**	Brazil	2018	Homo sapiens
OP508664.1	Brazil	2021	Alouatta sp	**ON022479.1**	Brazil	2018	Homo sapiens
OP508603.1	Brazil	2019	Alouatta sp	**ON022491.1**	Brazil	2018	Homo sapiens
OP508599.1	Brazil	2019	Alouatta sp	**ON022510.1**	Brazil	2018	Homo sapiens
OP508628.1	Brazil	2020	Alouatta sp	**ON022499.1**	Brazil	2018	Homo sapiens
OP508662.1	Brazil	2021	Alouatta sp	**ON022503.1**	Brazil	2018	Homo sapiens
OP508623.1	Brazil	2020	Alouatta sp	**ON022473.1**	Brazil	2018	Homo sapiens
OP508637.1	Brazil	2020	Alouatta guariba clamitans	**ON022502.1**	Brazil	2018	Homo sapiens
OP508635.1	Brazil	2020	Alouatta sp	**ON022522.1**	Brazil	2018	Homo sapiens
OP508632.1	Brazil	2020	Alouatta sp	**ON022534.1**	Brazil	2018	Homo sapiens
OP508612.1	Brazil	2020	Alouatta sp	**ON022727.1**	Brazil	2018	Homo sapiens
OP508620.1	Brazil	2020	Alouatta sp	**ON022489.1**	Brazil	2018	Homo sapiens
OP508626.1	Brazil	2020	Alouatta sp	**ON022501.1**	Brazil	2018	Homo sapiens
OP508610.1	Brazil	2020	Alouatta sp	**ON022493.1**	Brazil	2018	Homo sapiens
OP508663.1	Brazil	2021	Alouatta sp	**ON022517.1**	Brazil	2018	Callithrix
OP508642.1	Brazil	2020	Alouatta sp	**ON022465.1**	Brazil	2018	Callithrix
OP508618.1	Brazil	2020	Alouatta sp	**ON022466.1**	Brazil	2017	Alouatta sp
OP508614.1	Brazil	2019	Alouatta sp	**ON022519.1**	Brazil	2017	Callithrix
OP508607.1	Brazil	2020	Alouatta sp	**ON022460.1**	Brazil	2017	Alouatta sp
OP508696.1	Brazil	2020	Alouatta sp	**MK333808.1**	Brazil	2018	Haemagogus janthinomys
MZ712136.1	Brazil	2021	Alouatta guariba clamitans	**ON022516.1**	Brazil	2018	Homo sapiens
MZ712135.1	Brazil	2021	Alouatta guariba clamitans	**ON022273.1**	Brazil	2018	Homo sapiens

GenBank Acession	Country	Year	Source	GenBank Acession	Country	Year	Source
OP508665.1	Brazil	2021	Alouatta sp	**ON022278.1**	Brazil	2018	Homo sapiens
MZ712142.1	Brazil	2021	Alouatta guariba clamitans	**ON022397.1**	Brazil	2017	Alouatta guariba clamitans
OP508643.1	Brazil	2020	Alouatta sp	**ON022438.1**	Brazil	2018	Alouatta sp
MZ712141.1	Brazil	2021	Alouatta guariba clamitans	**ON022474.1**	Brazil	2018	Homo sapiens
OP508681.1	Brazil	2020	Alouatta sp	**ON022537.1**	Brazil	2017	Homo sapiens
OP508600.1	Brazil	2019	Alouatta sp	**ON022467.1**	Brazil	2017	Callithrix
OP508617.1	Brazil	2020	Alouatta sp	**ON022430.1**	Brazil	2017	Alouatta caraya
OP508631.1	Brazil	2020	Non-human primate (NHP)	**ON022463.1**	Brazil	2017	Alouatta sp
OP508621.1	Brazil	2020	Alouatta sp	**ON022383.1**	Brazil	2017	Cebidae
OP508687.1	Brazil	2021	Alouatta sp	**MH018077.1**	Brazil	2017	Homo sapiens
OP508587.1	Brazil	2019	Homo sapiens	**MH018070.1**	Brazil	2017	Homo sapiens
OP508630.1	Brazil	2020	Alouatta sp	**MH018085.1**	Brazil	2017	Homo sapiens
OP508608.1	Brazil	2020	Alouatta sp	**MH018076.1**	Brazil	2017	Homo sapiens
OP508602.1	Brazil	2019	Alouatta sp	**MH018083.1**	Brazil	2017	Alouatta sp
ON022559.1	Brazil	2019	Homo sapiens	**ON022509.1**	Brazil	2018	Homo sapiens
MZ604869.1	Brazil	2019	Homo sapiens	**ON022532.1**	Brazil	2017	Homo sapiens
MZ604841.1	Brazil	2019	Homo sapiens	**MH018092.1**	Brazil	2017	Homo sapiens
OP508716.1	Brazil	2021	Alouatta sp	**ON022387.1**	Brazil	2017	Alouatta caraya
OP508666.1	Brazil	2021	Alouatta sp	**ON022449.1**	Brazil	2018	Callithrix
OP508658.1	Brazil	2021	Alouatta sp	**ON022475.1**	Brazil	2018	Homo sapiens
OP508653.1	Brazil	2021	Alouatta sp	**ON022445.1**	Brazil	2018	Callithrix
OP508652.1	Brazil	2021	Alouatta sp	**ON022507.1**	Brazil	2018	Homo sapiens
OP508650.1	Brazil	2021	Alouatta sp	**ON022485.1**	Brazil	2018	Homo sapiens
OP508654.1	Brazil	2021	Alouatta sp	**ON022461.1**	Brazil	2017	Non-human primate
OP508711.1	Brazil	2021	Alouatta sp	**ON022735.1**	Brazil	2017	Callithrix
MZ712145.1	Brazil	2021	Alouatta guariba clamitans	**ON022734.1**	Brazil	2017	Callithrix
OP508647.1	Brazil	2020	Alouatta sp	**ON022512.1**	Brazil	2018	Homo sapiens
OP508714.1	Brazil	2021	Alouatta sp	**ON022543.1**	Brazil	2018	Homo sapiens
OP508712.1	Brazil	2021	Alouatta sp	**ON022486.1**	Brazil	2018	Homo sapiens
OP508649.1	Brazil	2020	Alouatta sp	**ON022452.1**	Brazil	2018	Alouatta sp
OP508651.1	Brazil	2020	Alouatta sp	**ON022539.1**	Brazil	2017	Homo sapiens
OP508656.1	Brazil	2021	Alouatta sp	**ON022660.1**	Brazil	2018	Non-human primate
OP508708.1	Brazil	2021	Alouatta sp	**ON022442.1**	Brazil	2018	Callithrix
OP508667.1	Brazil	2021	Alouatta sp	**ON022437.1**	Brazil	2018	Callithrix
OP508627.1	Brazil	2020	Alouatta sp	**ON022454.1**	Brazil	2018	Alouatta sp
OP508624.1	Brazil	2020	Alouatta sp	**ON022481.1**	Brazil	2018	Homo sapiens
OP508625.1	Brazil	2020	Alouatta sp	**ON022526.1**	Brazil	2018	Homo sapiens
OP508609.1	Brazil	2020	Alouatta sp	**ON022468.1**	Brazil	2017	Non-human primate
OP508640.1	Brazil	2020	Alouatta sp	**ON022724.1**	Brazil	2018	Homo sapiens
OP508706.1	Brazil	2020	Allouatta clamitans	**ON022533.1**	Brazil	2018	Homo sapiens
OP508615.1	Brazil	2020	Alouatta guariba clamitans	**ON022520.1**	Brazil	2017	Homo sapiens
OP508703.1	Brazil	2021	Alouatta sp	**ON022544.1**	Brazil	2018	Homo sapiens

GenBank Acession	Country	Year	Source	GenBank Acession	Country	Year	Source
OP508616.1	Brazil	2020	Alouatta guariba clamitans	**ON022733.1**	Brazil	2018	Callithrix
MZ604839.1	Brazil	2019	Homo sapiens	**ON022530.1**	Brazil	2018	Non-human primate
MZ604846.1	Brazil	2019	Homo sapiens	**MH018086.1**	Brazil	2017	Homo sapiens
ON022549.1	Brazil	2019	Homo sapiens	**MH018075.1**	Brazil	2017	Homo sapiens
MZ604853.1	Brazil	2019	Homo sapiens	**MH018097.1**	Brazil	2017	Callicebus sp
OP508591.1	Brazil	2019	Homo sapiens	**MH018093.1**	Brazil	2017	Homo sapiens
OP508594.1	Brazil	2019	Alouatta sp	**MH018074.1**	Brazil	2017	Homo sapiens
OP508598.1	Brazil	2019	Alouatta sp	**MH018089.1**	Brazil	2017	Homo sapiens
OP508595.1	Brazil	2019	Alouatta sp	**MH018084.1**	Brazil	2017	Callithrix sp.
OP508596.1	Brazil	2019	Alouatta sp	**MH018073.1**	Brazil	2017	Homo sapiens
OP508675.1	Brazil	2019	Hg janthinomys/capricornii	**MH018072.1**	Brazil	2017	Homo sapiens
OP508593.1	Brazil	2019	Alouatta sp	**MH018087.1**	Brazil	2017	Homo sapiens
OP508688.1	Brazil	2019	Alouatta sp	**MH018088.1**	Brazil	2017	Homo sapiens
MZ604871.1	Brazil	2019	Homo sapiens	**ON022723.1**	Brazil	2017	Non-human primate
MZ604857.1	Brazil	2019	Homo sapiens	**ON022732.1**	Brazil	2017	Non-human primate
ON022548.1	Brazil	2019	Homo sapiens	**MH018098.1**	Brazil	2017	Cebidae sp
ON022369.1	Brazil	2019	Non-human primate	**MH018081.1**	Brazil	2017	Cebidae sp
ON022658.1	Brazil	2018	Alouatta sp	**ON022731.1**	Brazil	2017	Homo sapiens
ON022562.1	Brazil	2019	Homo sapiens	**ON022726.1**	Brazil	2018	Homo sapiens
OP508597.1	Brazil	2019	Alouatta sp	**ON022529.1**	Brazil	2017	Homo sapiens
OP508592.1	Brazil	2019	Alouatta sp	**ON022469.1**	Brazil	2017	Callithrix
ON022561.1	Brazil	2019	Homo sapiens	**ON022730.1**	Brazil	2017	Homo sapiens
ON022558.1	Brazil	2019	Homo sapiens	**ON022528.1**	Brazil	2017	Homo sapiens
ON022555.1	Brazil	2019	Homo sapiens	**ON022514.1**	Brazil	2018	Homo sapiens
ON022546.1	Brazil	2019	Homo sapiens	**ON022511.1**	Brazil	2018	Homo sapiens
ON022552.1	Brazil	2019	Homo sapiens	**ON022427.1**	Brazil	2017	Alouatta guariba clamitans
MZ604847.1	Brazil	2019	Homo sapiens	**ON022462.1**	Brazil	2018	Callithrix
MZ604863.1	Brazil	2019	Homo sapiens	**ON022413.1**	Brazil	2017	Alouatta guariba clamitans
MZ604875.1	Brazil	2019	Homo sapiens	**ON022406.1**	Brazil	2017	Alouatta guariba clamitans
MZ604838.1	Brazil	2019	Homo sapiens	**ON022432.1**	Brazil	2017	Alouatta guariba clamitans
MZ604843.1	Brazil	2019	Homo sapiens	**ON022392.1**	Brazil	2018	Callithrix
MZ604844.1	Brazil	2019	Homo sapiens	**ON022497.1**	Brazil	2018	Homo sapiens
MW308135.1	Brazil	2019	Homo sapiens	**ON022443.1**	Brazil	2017	Alouatta
ON022319.1	Brazil	2019	Homo sapiens	**ON022398.1**	Brazil	2017	Alouatta guariba clamitans
MZ604864.1	Brazil	2019	Homo sapiens	**ON022523.1**	Brazil	2017	Homo sapiens
MZ604854.1	Brazil	2019	Homo sapiens	**ON022524.1**	Brazil	2017	Homo sapiens
ON022306.1	Brazil	2018	Alouatta sp	**ON022409.1**	Brazil	2017	Alouatta caraya
MH030059.1	Brazil	2017	Alouatta sp	**ON022416.1**	Brazil	2017	Alouatta caraya
ON022308.1	Brazil	2018	Alouatta sp	**ON022538.1**	Brazil	2017	Homo sapiens
ON022583.1	Brazil	2018	Alouatta sp	**ON022527.1**	Brazil	2017	Homo sapiens
ON022595.1	Brazil	2018	Alouatta sp	**ON022535.1**	Brazil	2017	Homo sapiens
ON022307.1	Brazil	2018	Homo sapiens	**ON022525.1**	Brazil	2017	Homo sapiens

GenBank Acession	Country	Year	Source	GenBank Acession	Country	Year	Source
ON022309.1	Brazil	2018	Alouatta sp	**ON022536.1**	Brazil	2017	Homo sapiens
MW308134.1	Brazil	2018	Homo sapiens	**ON022399.1**	Brazil	2017	Cebidae
MZ604850.1	Brazil	2019	Homo sapiens	**MH484432.1**	Brazil	2017	Alouatta sp
MZ604858.1	Brazil	2019	Homo sapiens	**ON022531.1**	Brazil	2017	Homo sapiens
MZ604860.1	Brazil	2019	Homo sapiens	**MH018090.1**	Brazil	2017	Homo sapiens
MZ604867.1	Brazil	2019	Homo sapiens	**ON022456.1**	Brazil	2017	Non-human primate
MZ604849.1	Brazil	2019	Homo sapiens	**MK882601.1**	Brazil	2017	Homo sapiens
MZ604851.1	Brazil	2019	Homo sapiens	**ON022455.1**	Brazil	2017	Alouatta sp
MZ604852.1	Brazil	2019	Homo sapiens	**ON022258.1**	Brazil	2017	Cebidae
MZ604874.1	Brazil	2019	Homo sapiens	**ON022265.1**	Brazil	2018	Callithrix penicillata
MZ604848.1	Brazil	2019	Homo sapiens	**ON022268.1**	Brazil	2018	Homo sapiens
MZ604855.1	Brazil	2019	Homo sapiens	**ON022423.1**	Brazil	2017	Callithrix penicillata
ON022295.1	Brazil	2018	Haemagogus leucocelaenus	**ON022262.1**	Brazil	2018	Alouatta sp
MK583151.1	Brazil	2018	Homo sapiens	**ON502413.1**	Brazil	2018	Homo sapiens
MK333798.1	Brazil	2018	Homo sapiens	**ON502399.1**	Brazil	2018	Homo sapiens
MH193173.1	Brazil	2018	Alouatta sp	**ON022257.1**	Brazil	2018	Homo sapiens
ON022567.1	Brazil	2017	Alouatta sp	**ON022263.1**	Brazil	2018	Homo sapiens
MH030063.1	Brazil	2017	Alouatta sp	**ON502391.1**	Brazil	2018	Homo sapiens
MH030065.1	Brazil	2017	Alouatta sp	**ON502438.1**	Brazil	2018	Homo sapiens
ON022352.1	Brazil	2018	Alouatta sp	**ON502389.1**	Brazil	2018	Homo sapiens
MH030061.1	Brazil	2017	Alouatta sp	**ON022728.1**	Brazil	2018	Homo sapiens
MH030060.1	Brazil	2017	Alouatta sp	**ON022495.1**	Brazil	2018	Homo sapiens
MH030062.1	Brazil	2017	Alouatta sp	**ON022725.1**	Brazil	2017	Homo sapiens
ON022337.1	Brazil	2018	Alouatta sp	**ON022428.1**	Brazil	2017	Alouatta caraya
MH030064.1	Brazil	2017	Alouatta sp	**ON022425.1**	Brazil	2017	Callithrix penicillata
ON022330.1	Brazil	2018	Alouatta sp	**ON022385.1**	Brazil	2017	Callithrix penicillata
MH030050.1	Brazil	2017	Callicebus sp	**ON022405.1**	Brazil	2017	Callithrix penicillata
MK583147.1	Brazil	2018	Homo sapiens	**ON022411.1**	Brazil	2017	Callithrix penicillata
MK583155.1	Brazil	2018	Homo sapiens	**ON022431.1**	Brazil	2017	Cebidae
MZ604845.1	Brazil	2018	Homo sapiens	**ON022373.1**	Brazil	2017	Alouatta caraya
ON022743.1	Brazil	2018	Homo sapiens	**MK249066.1**	Brazil	2018	Non-human primate
ON022745.1	Brazil	2018	Homo sapiens	**ON502398.1**	Brazil	2018	Homo sapiens
ON022645.1	Brazil	2017	Cebus	**ON502409.1**	Brazil	2018	Homo sapiens
ON022644.1	Brazil	2017	Callithrix	**ON022266.1**	Brazil	2017	Cebidae
ON022628.1	Brazil	2017	Alouatta sp	**ON502414.1**	Brazil	2018	Homo sapiens
ON022631.1	Brazil	2017	Alouatta sp	**ON502392.1**	Brazil	2018	Homo sapiens
ON022636.1	Brazil	2017	Callicebus	**ON502419.1**	Brazil	2018	Homo sapiens
ON022634.1	Brazil	2017	Alouatta sp	**ON022260.1**	Brazil	2018	Homo sapiens
ON022642.1	Brazil	2017	Alouatta sp	**ON502396.1**	Brazil	2018	Homo sapiens
MH030051.1	Brazil	2017	Alouatta sp	**ON022259.1**	Brazil	2018	Callithrix penicillata
ON022356.1	Brazil	2017	Alouatta sp	**ON502393.1**	Brazil	2018	Homo sapiens
ON022353.1	Brazil	2017	Alouatta sp	**ON502410.1**	Brazil	2018	Homo sapiens

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ON022360.1	Brazil	2018	Alouatta sp	**ON502394.1**	Brazil	2018	Homo sapiens
ON022359.1	Brazil	2017	Alouatta sp	**ON502442.1**	Brazil	2018	Homo sapiens
ON022354.1	Brazil	2017	Alouatta sp	**ON502412.1**	Brazil	2018	Homo sapiens
ON022355.1	Brazil	2017	Alouatta sp	**ON022422.1**	Brazil	2017	Cebidae
MZ604872.1	Brazil	2018	Homo sapiens	**ON022417.1**	Brazil	2017	Alouatta guariba clamitans
MZ604859.1	Brazil	2018	Homo sapiens	**MH484426.1**	Brazil	2017	Non-human primate
MK583166.1	Brazil	2018	Homo sapiens	**MH484434.1**	Brazil	2017	Homo sapiens
MK333799.1	Brazil	2018	Homo sapiens	**MH484427.1**	Brazil	2017	Callithrix sp
ON022342.1	Brazil	2018	Callithrix	**ON022384.1**	Brazil	2017	Callithrix geoffroyi
MK583163.1	Brazil	2018	Homo sapiens	**ON022415.1**	Brazil	2017	Callithrix geoffroyi
MH030049.1	Brazil	2017	Callithrix	**ON022379.1**	Brazil	2017	Non-human primate
ON022714.1	Brazil	2017	Non-human primate	**ON022388.1**	Brazil	2017	Callithrix geoffroyi
ON022598.1	Brazil	2018	Non-human primate	**ON022375.1**	Brazil	2017	Cebidae
ON022709.1	Brazil	2017	Non-human primate	**MF538784.2**	Brazil	2017	Homo sapiens
ON022659.1	Brazil	2018	Alouatta sp	**MF170977.1**	Brazil	2017	Homo sapiens
ON022570.1	Brazil	2017	Non-human primate	**KY885001.2**	Brazil	2017	Alouatta guariba clamitans
ON022706.1	Brazil	2017	Alouatta sp	**MF170978.1**	Brazil	2017	Homo sapiens
MH030055.1	Brazil	2017	Alouatta sp	**MF170979.1**	Brazil	2017	Homo sapiens
ON022652.1	Brazil	2017	Non-human primate	**MF170976.1**	Brazil	2017	Homo sapiens
ON022674.1	Brazil	2018	Alouatta sp	**ON502402.1**	Brazil	2017	Homo sapiens
ON022673.1	Brazil	2018	Alouatta sp	**MF170968.1**	Brazil	2017	Homo sapiens
ON022347.1	Brazil	2018	Alouatta sp	**ON022246.1**	Brazil	2018	Homo sapiens
ON022358.1	Brazil	2018	Alouatta sp	**ON022245.1**	Brazil	2018	Homo sapiens
ON022338.1	Brazil	2018	Alouatta sp	**ON502417.1**	Brazil	2018	Homo sapiens
ON022329.1	Brazil	2018	Alouatta sp	**ON022393.1**	Brazil	2017	Callithrix penicillata
ON022345.1	Brazil	2018	Alouatta sp	**ON022267.1**	Brazil	2018	Homo sapiens
MH030067.1	Brazil	2017	Alouatta sp	**ON022380.1**	Brazil	2017	Alouatta guariba clamitans
MH030056.1	Brazil	2017	Alouatta sp	**ON022244.1**	Brazil	2018	Homo sapiens
MZ604870.1	Brazil	2017	Homo sapiens	**ON022243.1**	Brazil	2018	Callithrix
ON022296.1	Brazil	2018	Alouatta sp	**ON022248.1**	Brazil	2018	Homo sapiens
MH030084.1	Brazil	2017	Alouatta sp	**ON022247.1**	Brazil	2018	Homo sapiens
MH030073.1	Brazil	2017	Alouatta sp	**ON502418.1**	Brazil	2018	Homo sapiens
MH030083.1	Brazil	2017	Alouatta sp	**ON502390.1**	Brazil	2018	Homo sapiens
MK583157.1	Brazil	2018	Homo sapiens	**ON022377.1**	Brazil	2018	Callithrix penicillata
MZ604842.1	Brazil	2018	Homo sapiens	**ON502400.1**	Brazil	2018	Homo sapiens
MK583148.1	Brazil	2018	Homo sapiens	**MK583154.1**	Brazil	2018	Homo sapiens
ON022361.1	Brazil	2018	Alouatta sp	**ON502408.1**	Brazil	2018	Homo sapiens
ON022343.1	Brazil	2018	Callithrix	**ON502395.1**	Brazil	2018	Homo sapiens
MH030075.1	Brazil	2017	Alouatta sp	**ON502397.1**	Brazil	2018	Homo sapiens
MH030052.1	Brazil	2017	Alouatta sp	**ON502407.1**	Brazil	2017	Homo sapiens
MK583153.1	Brazil	2018	Homo sapiens	**MK333800.1**	Brazil	2017	Alouatta guariba clamitans
ON022339.1	Brazil	2018	Alouatta sp	**KY885000.2**	Brazil	2017	Alouatta guariba clamitans

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ON022344.1	Brazil	2018	Alouatta sp	**MF423374.2**	Brazil	2017	Haemagogus janthinomys
ON022336.1	Brazil	2018	Alouatta sp	**MF370531.1**	Brazil	2017	Homo sapiens
ON022335.1	Brazil	2018	Alouatta sp	**MH018107.1**	Brazil	2017	Homo sapiens
ON022331.1	Brazil	2018	Alouatta sp	**MF370537.1**	Brazil	2017	Non-human primate
ON022333.1	Brazil	2018	Alouatta sp	**MN643084.1**	Brazil	2018	Homo sapiens
ON022332.1	Brazil	2018	Alouatta sp	**MN643083.1**	Brazil	2018	Homo sapiens
ON022334.1	Brazil	2018	Alouatta sp	**MF370530.1**	Brazil	2017	Haemagogus janthinomys
ON022351.1	Brazil	2018	Alouatta sp	**MF538782.2**	Brazil	2017	Homo sapiens
ON022697.1	Brazil	2018	Alouatta sp	**ON502415.1**	Brazil	2018	Homo sapiens
MH193175.1	Brazil	2018	Alouatta sp	**MK882605.1**	Brazil	2017	Homo sapiens
MH030085.1	Brazil	2017	Alouatta sp	**MK882615.1**	Brazil	2017	Homo sapiens
MK760663.1	Netherlands	2018	Homo sapiens	**ON022253.1**	Brazil	2018	Homo sapiens
MK760662.1	Netherlands	2018	Homo sapiens	**ON022272.1**	Brazil	2018	Homo sapiens
MK760666.1	Netherlands	2018	Homo sapiens	**MH484433.1**	Brazil	2017	Non-human primate
MK760664.1	Netherlands	2018	Homo sapiens	**MK882616.1**	Brazil	2017	Homo sapiens
MK760665.1	Netherlands	2018	Homo sapiens	**ON022256.1**	Brazil	2018	Homo sapiens
MK760660.1	Netherlands	2018	Homo sapiens	**ON022249.1**	Brazil	2018	Homo sapiens
MK760661.1	Netherlands	2018	Homo sapiens	**MK882599.1**	Brazil	2017	Homo sapiens
ON022282.1	Brazil	2018	Homo sapiens	**ON022241.1**	Brazil	2018	Alouatta sp
MK583158.1	Brazil	2018	Homo sapiens	**MK882606.1**	Brazil	2017	Homo sapiens
MK583165.1	Brazil	2018	Homo sapiens	**MK882608.1**	Brazil	2017	Homo sapiens
ON022357.1	Brazil	2017	Alouatta sp	**ON022279.1**	Brazil	2018	Homo sapiens
MK583149.1	Brazil	2018	Homo sapiens	**MK882602.1**	Brazil	2017	Domingos Martins
MH030076.1	Brazil	2017	Alouatta sp	**ON022261.1**	Brazil	2018	Homo sapiens
MH030054.1	Brazil	2017	Alouatta sp	**MH018069.1**	Brazil	2017	Homo sapiens
MH030069.1	Brazil	2017	Monkey	**MK882612.1**	Brazil	2017	Homo sapiens
MK583167.1	Brazil	2018	Homo sapiens	**MH329655.1**	Brazil	2018	Aedes albopictus
ON022610.1	Brazil	2017	Alouatta sp	**MK882609.1**	Brazil	2017	Homo sapiens
ON022632.1	Brazil	2017	Alouatta sp	**MH484428.1**	Brazil	2017	Homo sapiens
ON022315.1	Brazil	2018	Homo sapiens	**MH484424.1**	Brazil	2017	Homo sapiens
ON022314.1	Brazil	2018	Non-human primate	**MH018099.1**	Brazil	2017	Non-human primate
MH030053.1	Brazil	2017	Alouatta sp	**MN604280.1**	Brazil	2017	Callithrix
ON022596.1	Brazil	2017	Alouatta sp	**MN604287.1**	Brazil	2017	Alouatta sp
ON022556.1	Brazil	2019	Homo sapiens	**MH018080.1**	Brazil	2017	Homo sapiens
ON022557.1	Brazil	2019	Homo sapiens	**ON502425.1**	Brazil	2017	Homo sapiens
ON022547.1	Brazil	2019	Homo sapiens	**MH484425.1**	Brazil	2017	Homo sapiens
ON022545.1	Brazil	2019	Homo sapiens	**ON502434.1**	Brazil	2017	Homo sapiens
ON022560.1	Brazil	2019	Homo sapiens	**ON502430.1**	Brazil	2017	Homo sapiens
ON022563.1	Brazil	2019	Homo sapiens	**ON502427.1**	Brazil	2017	Homo sapiens
ON022550.1	Brazil	2019	Homo sapiens	**MH018068.1**	Brazil	2017	Homo sapiens
ON022676.1	Brazil	2019	Non-human primate	**MH560359.1**	Brazil	2017	Homo sapiens
ON022551.1	Brazil	2019	Homo sapiens	**ON502428.1**	Brazil	2017	Homo sapiens

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ON022370.1	Brazil	2019	Non-human primate	**MF370532.1**	Brazil	2017	Homo sapiens
ON022367.1	Brazil	2019	Alouatta sp	**MF370534.1**	Brazil	2016	Callithrix penicillata
ON022368.1	Brazil	2019	Non-human primate	**ON502437.1**	Brazil	2017	Homo sapiens
ON022324.1	Brazil	2018	Alouatta sp	**MF370538.1**	Brazil	2017	Callithrix penicillata
ON022323.1	Brazil	2018	Alouatta sp	**MN604281.2**	Brazil	2017	Alouatta sp
ON022365.1	Brazil	2018	Alouatta sp	**MN604282.2**	Brazil	2017	Callithrix
ON022362.1	Brazil	2017	Alouatta sp	**MN604283.2**	Brazil	2017	Callithrix
ON022341.1	Brazil	2018	Alouatta sp	**ON022458.1**	Brazil	2018	Alouatta sp
ON022363.1	Brazil	2017	Alouatta sp	**MN604285.1**	Brazil	2017	Callithrix penicillata
ON022364.1	Brazil	2017	Alouatta sp	**MN604286.1**	Brazil	2017	Callithrix penicillata
ON022569.1	Brazil	2018	Non-human primate	**ON022457.1**	Brazil	2018	Callithrix
ON022326.1	Brazil	2018	Alouatta sp	**ON022451.1**	Brazil	2018	Alouatta sp
ON022328.1	Brazil	2018	Alouatta sp	**ON022472.1**	Brazil	2018	Homo sapiens
ON022740.1	Brazil	2018	Homo sapiens	**ON022464.1**	Brazil	2017	Non-human primate
ON022327.1	Brazil	2018	Alouatta sp	**ON022470.1**	Brazil	2018	Homo sapiens
ON022325.1	Brazil	2018	Alouatta sp	**ON022447.1**	Brazil	2017	Homo sapiens
ON022320.1	Brazil	2018	Alouatta sp	**ON022444.1**	Brazil	2017	Alouatta sp
ON022602.1	Brazil	2018	Alouatta sp	**ON022440.1**	Brazil	2018	Alouatta sp
ON022321.1	Brazil	2017	Alouatta sp	**MN643092.1**	Brazil	2018	Alouatta guariba
ON022648.1	Brazil	2017	Alouatta sp	**ON022459.1**	Brazil	2018	Callithrix
ON022737.1	Brazil	2018	Homo sapiens	**ON022434.1**	Brazil	2018	Alouatta sp
ON022739.1	Brazil	2018	Homo sapiens	**ON022521.1**	Brazil	2017	Homo sapiens
ON022741.1	Brazil	2018	Homo sapiens	**ON022433.1**	Brazil	2018	Alouatta sp
ON022664.1	Brazil	2017	Non-human primate	**ON022441.1**	Brazil	2018	Callicebus
ON022633.1	Brazil	2017	Alouatta sp	**ON022478.1**	Brazil	2018	Homo sapiens
ON022715.1	Brazil	2017	Alouatta sp	**ON022488.1**	Brazil	2018	Homo sapiens
ON022638.1	Brazil	2017	Callicebus	**ON022515.1**	Brazil	2018	Homo sapiens
ON022613.1	Brazil	2017	Alouatta sp	**ON022395.1**	Brazil	2017	Alouatta guariba clamitans
ON022712.1	Brazil	2017	Alouatta sp	**ON022518.1**	Brazil	2017	Non-human primate
ON022620.1	Brazil	2017	Alouatta sp	**ON022487.1**	Brazil	2018	Homo sapiens
ON022711.1	Brazil	2017	Alouatta sp	**ON022505.1**	Brazil	2018	Homo sapiens
ON022736.1	Brazil	2018	Homo sapiens	**MK882613.1**	Brazil	2017	Homo sapiens
ON022607.1	Brazil	2017	Alouatta sp	**ON022484.1**	Brazil	2018	Homo sapiens
ON022713.1	Brazil	2017	Callithrix	**ON022446.1**	Brazil	2017	Non-human primate
ON022601.1	Brazil	2017	Alouatta sp	**ON022436.1**	Brazil	2018	Alouatta sp
ON022568.1	Brazil	2017	Alouatta sp	**ON022277.1**	Brazil	2018	Homo sapiens
ON022663.1	Brazil	2017	Non-human primate	**MN506278.1**	Brazil	2017	Haemagogus leucocelaenus
ON022653.1	Brazil	2017	Non-human primate	**ON022313.1**	Brazil	2018	Alouatta sp
ON022571.1	Brazil	2017	Non-human primate	**MN506277.1**	Brazil	2017	Haemagogus leucocelaenus
ON022667.1	Brazil	2017	Non-human primate	**MK333802.1**	Brazil	2017	Haemagogus leucocelaenus
ON022654.1	Brazil	2017	Non-human primate	**MF170974.1**	Brazil	2017	Homo sapiens
ON022670.1	Brazil	2018	Non-human primate	**MN506281.1**	Brazil	2017	Haemagogus janthinomys

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ON022649.1	Brazil	2017	Non-human primate	**MN643088.1**	Brazil	2017	Alouatta guariba
ON022666.1	Brazil	2017	Non-human primate	**MF423376.2**	Brazil	2017	Alouatta guariba clamitans
ON022604.1	Brazil	2017	Alouatta sp	**MF370547.1**	Brazil	2017	Alouatta sp
ON022624.1	Brazil	2017	Alouatta sp	**MH018112.1**	Brazil	2017	Alouatta sp
ON022627.1	Brazil	2017	Alouatta sp	**MK333805.1**	Brazil	2018	Sabethes chloropterus
ON022630.1	Brazil	2017	Alouatta sp	**ON022477.1**	Brazil	2018	Homo sapiens
ON022707.1	Brazil	2017	Alouatta sp	**ON022490.1**	Brazil	2018	Homo sapiens
ON022655.1	Brazil	2017	Alouatta sp	**ON022496.1**	Brazil	2017	Homo sapiens
ON022622.1	Brazil	2017	Alouatta sp	**ON022453.1**	Brazil	2018	Callithrix
OP508590.1	Brazil	2019	Homo sapiens	**ON022287.1**	Brazil	2018	Alouatta sp
ON022647.1	Brazil	2017	Alouatta sp	**MN643086.1**	Brazil	2018	Homo sapiens
ON022605.1	Brazil	2017	Alouatta sp	**MH378284.1**	Brazil	2017	Homo sapiens
MH030058.1	Brazil	2017	Alouatta sp	**ON022285.1**	Brazil	2018	Alouatta sp
MH030068.1	Brazil	2017	Alouatta sp	**MN506270.1**	Brazil	2017	Haemagogus leucocelaenus
MH030066.1	Brazil	2017	Alouatta sp	**MN506269.1**	Brazil	2017	Haemagogus leucocelaenus
ON022390.1	Brazil	2017	Alouatta caraya	**MN506274.1**	Brazil	2017	Aedes taeniorhynchus
ON022381.1	Brazil	2017	Alouatta caraya	**MN506272.1**	Brazil	2017	Aedes scapularis
ON022646.1	Brazil	2017	Alouatta sp	**MK089775.1**	Brazil	2017	Ochlerotatus taeniorhynchus
ON022621.1	Brazil	2017	Non-human primate	**MN506276.1**	Brazil	2017	Haemagogus leucocelaenus
MH030087.1	Brazil	2017	Homo sapiens	**MF538786.2**	Brazil	2017	marmoset
ON022685.1	Brazil	2017	Alouatta sp	**MN643081.1**	Brazil	2018	Homo sapiens
MZ604865.1	Brazil	2018	Homo sapiens	**ON022480.1**	Brazil	2018	Homo sapiens
MZ604856.1	Brazil	2018	Homo sapiens	**MN643082.1**	Brazil	2018	Homo sapiens
MK583161.1	Brazil	2018	Homo sapiens	**MK882603.1**	Brazil	2018	Homo sapiens
MK583162.1	Brazil	2018	Homo sapiens	**MK882600.1**	Brazil	2018	Homo sapiens
MK583175.1	Brazil	2018	Homo sapiens	**MK533792.1**	Brazil	2019	Alouatta guariba clamitans
ON022744.1	Brazil	2018	Homo sapiens	**MN506275.1**	Brazil	2017	Haemagogus leucocelaenus
MK583182.1	Brazil	2018	Homo sapiens	**MF170981.1**	Brazil	2017	Homo sapiens
MH193174.1	Brazil	2018	Homo sapiens	**MF170970.1**	Brazil	2017	Homo sapiens
MH030078.1	Brazil	2017	Alouatta sp	**MF170969.1**	Brazil	2017	Homo sapiens
MZ604876.1	Brazil	2018	Homo sapiens	**MN506280.1**	Brazil	2017	Haemagogus leucocelaenus
MK583176.1	Brazil	2018	Homo sapiens	**MN506279.1**	Brazil	2017	Haemagogus leucocelaenus
ON022586.1	Brazil	2018	Alouatta sp	**MN506268.1**	Brazil	2017	Haemagogus leucocelaenus
ON022294.1	Brazil	2018	Haemagogus leucocelaenus	**MN506271.1**	Brazil	2017	Haemagogus leucocelaenus
ON022291.1	Brazil	2018	Haemagogus leucocelaenus	**MN506267.1**	Brazil	2017	Haemagogus leucocelaenus
ON022293.1	Brazil	2018	Haemagogus leucocelaenus	**MF170980.1**	Brazil	2017	Homo sapiens
ON022304.1	Brazil	2018	Haemagogus leucocelaenus	**MK333801.1**	Brazil	2017	Haemagogus janthinomys
MH030072.1	Brazil	2017	Alouatta sp	**MF423375.2**	Brazil	2017	Alouatta guariba clamitans
ON022588.1	Brazil	2018	Alouatta sp	**MK583168.1**	Brazil	2018	Homo sapiens
MK583156.1	Brazil	2018	Homo sapiens	**MN506282.1**	Brazil	2017	Haemagogus janthinomys
MK583181.1	Brazil	2018	Homo sapiens	**MF170973.1**	Brazil	2017	Homo sapiens
ON022284.1	Brazil	2018	Callithrix	**MN643091.1**	Brazil	2018	Alouatta guariba

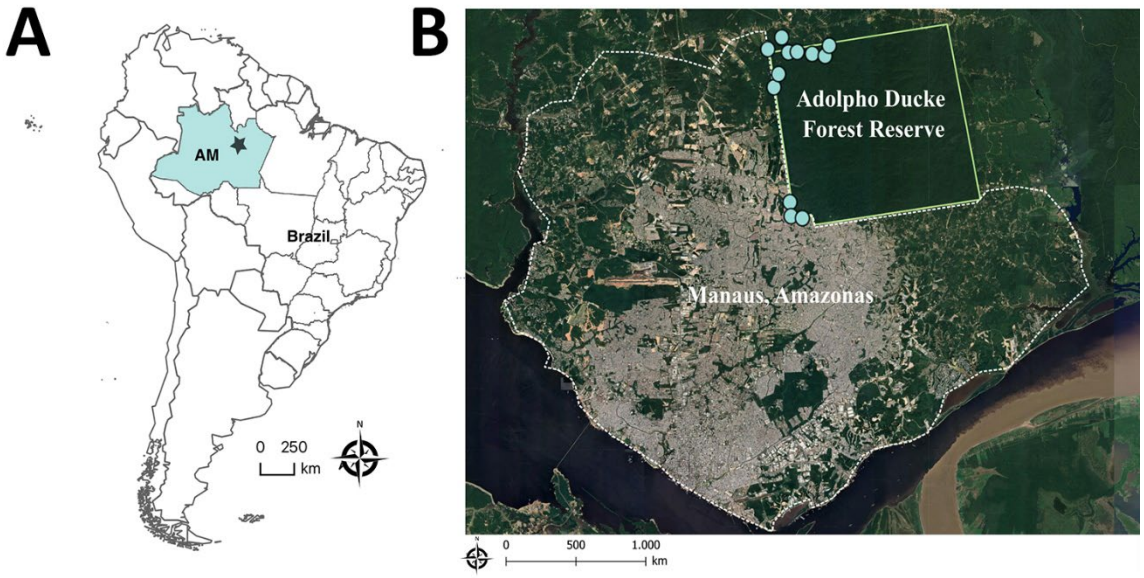
GenBank Acession	Country	Year	Source	GenBank Acession	Country	Year	Source
MH030088.1	Brazil	2017	Homo sapiens	**MN506283.1**	Brazil	2017	Haemagogus janthinomys
MK583179.1	Brazil	2018	Homo sapiens	**MN506273.1**	Brazil	2017	Haemagogus leucocelaenus
MK583152.1	Brazil	2017	Homo sapiens	**MN643090.1**	Brazil	2018	Alouatta guariba
MK583178.1	Brazil	2018	Homo sapiens	**MK882611.1**	Brazil	2017	Homo sapiens
ON022298.1	Brazil	2018	Homo sapiens	**MK882607.1**	Brazil	2017	Homo sapiens
MK583164.1	Brazil	2018	Homo sapiens	**MF170972.1**	Brazil	2017	Homo sapiens
MZ604868.1	Brazil	2018	Homo sapiens	**MK882621.1**	Brazil	2018	Homo sapiens
ON022592.1	Brazil	2018	Alouatta sp	**MF434851.2**	Brazil	2017	Homo sapiens
ON022577.1	Brazil	2018	Alouatta sp	**MN643089.1**	Brazil	2017	Alouatta guariba
ON022675.1	Brazil	2018	Alouatta sp	**ON022435.1**	Brazil	2017	Alouatta sp
ON022626.1	Brazil	2017	Alouatta sp	**ON022269.1**	Brazil	2017	Alouatta sp
ON022340.1	Brazil	2018	Alouatta sp	**MK882617.1**	Brazil	2017	Homo sapiens
ON022348.1	Brazil	2018	Alouatta sp	**MN643087.1**	Brazil	2018	Homo sapiens
ON022318.1	Brazil	2018	Homo sapiens	**MN506266.1**	Brazil	2018	Haemagogus janthinomys
ON022346.1	Brazil	2018	Alouatta sp	**MN643085.1**	Brazil	2018	Homo sapiens
ON022350.1	Brazil	2018	Alouatta sp	**MF538783.2**	Brazil	2017	Homo sapiens
MH030089.1	Brazil	2017	Homo sapiens	**MF370533.1**	Brazil	2017	Homo sapiens
ON022283.1	Brazil	2018	Callicebus	**ON502432.1**	Brazil	2017	Homo sapiens
ON022668.1	Brazil	2018	Non-human primate	**ON502404.1**	Brazil	2017	Homo sapiens
ON022292.1	Brazil	2018	Non-human primate	**ON502426.1**	Brazil	2017	Homo sapiens
ON022594.1	Brazil	2018	Alouatta sp	**MH018091.1**	Brazil	2017	Homo sapiens
ON022637.1	Brazil	2017	Alouatta sp	**MH018078.1**	Brazil	2017	Homo sapiens
MK583160.1	Brazil	2018	Homo sapiens	**ON502429.1**	Brazil	2017	Homo sapiens
ON022575.1	Brazil	2017	Non-human primate	**MH018094.1**	Brazil	2017	Homo sapiens
MK583172.1	Brazil	2018	Homo sapiens	**MH018110.1**	Brazil	2017	Callithrix sp.
ON022671.1	Brazil	2018	Non-human primate	**MH018111.1**	Brazil	2017	Homo sapiens
ON022565.1	Brazil	2018	Non-human primate	**MH018113.1**	Brazil	2017	Homo sapiens
ON022657.1	Brazil	2018	Alouatta sp	**MH018109.1**	Brazil	2017	Alouatta sp
ON022629.1	Brazil	2017	Alouatta sp	**MH018106.1**	Brazil	2017	Alouatta sp
ON022572.1	Brazil	2018	Alouatta sp	**MH018104.1**	Brazil	2017	Homo sapiens
ON022650.1	Brazil	2017	Alouatta sp	**MH018102.1**	Brazil	2017	Non-human primate
ON022597.1	Brazil	2018	Non-human primate	**MH018103.1**	Brazil	2017	Homo sapiens
ON022635.1	Brazil	2017	Non-human primate	**MH018105.1**	Brazil	2017	Homo sapiens
ON022554.1	Brazil	2018	Homo sapiens	**MK249065.1**	Brazil	2017	Homo sapiens
ON022672.1	Brazil	2018	Non-human primate	**MH018096.1**	Brazil	2017	Alouatta sp
ON022322.1	Brazil	2018	Non-human primate	**MH018095.1**	Brazil	2017	Callithrix sp
ON022705.1	Brazil	2017	Alouatta sp	**MH018079.1**	Brazil	2017	Homo sapiens
ON022682.1	Brazil	2017	Non-human primate	**ON502433.1**	Brazil	2017	Homo sapiens
ON022679.1	Brazil	2017	Non-human primate	**ON502423.1**	Brazil	2017	Homo sapiens
ON022680.1	Brazil	2017	Non-human primate	**ON502436.1**	Brazil	2017	Homo sapiens
ON022414.1	Brazil	2017	Alouatta caraya	**ON502431.1**	Brazil	2017	Homo sapiens
MH018064.1	Brazil	2017	Alouatta sp	**ON502406.1**	Brazil	2017	Homo sapiens

GenBank Acession	Country	Year	Source	GenBank Acession	Country	Year	Source
ON022540.1	Brazil	2018	Homo sapiens	**MF465805.1**	Brazil	2017	Homo sapiens
ON022541.1	Brazil	2018	Homo sapiens	**MH484429.1**	Brazil	2017	Callithrix sp
ON022429.1	Brazil	2017	Alouatta caraya	**MF370535.1**	Brazil	2016	Alouatta sp
ON022400.1	Brazil	2017	Callithrix penicillata	**MF370536.1**	Brazil	2016	Alouatta sp
ON022600.1	Brazil	2016	Alouatta sp	**MF370549.1**	Brazil	2015	Non-human primate
ON022669.1	Brazil	2018	Callicebus	**MK882614.1**	Brazil	2017	Homo sapiens
ON022599.1	Brazil	2018	Cebus	**MH018071.1**	Brazil	2017	Homo sapiens
ON022689.1	Brazil	2017	Non-human primate	**ON502439.1**	Brazil	2018	Homo sapiens
ON022688.1	Brazil	2016	Alouatta sp	**ON502405.1**	Brazil	2018	Homo sapiens
MT497521.1	Brazil	2016	Alouatta sp	**ON022372.1**	Brazil	2017	Alouatta guariba clamitans
ON022677.1	Brazil	2017	Sapajus	**ON022251.1**	Brazil	2018	Cebidae
ON022698.1	Brazil	2016	Alouatta sp	**ON502440.1**	Brazil	2018	Homo sapiens
ON022681.1	Brazil	2017	Callicebus	**ON502411.1**	Brazil	2018	Homo sapiens
ON022408.1	Brazil	2017	Alouatta caraya	**ON022255.1**	Brazil	2018	Homo sapiens
ON022407.1	Brazil	2017	Alouatta guariba clamitans	**ON022250.1**	Brazil	2018	Homo sapiens
ON022581.1	Brazil	2017	Alouatta sp	**ON502420.1**	Brazil	2018	Homo sapiens
ON022686.1	Brazil	2016	Alouatta sp	**ON022254.1**	Brazil	2018	Callithrix penicillata
MT497522.1	Brazil	2016	Alouatta sp	**ON022252.1**	Brazil	2018	Cebidae
ON022579.1	Brazil	2017	Alouatta sp	**ON502421.1**	Brazil	2018	Homo sapiens
ON022421.1	Brazil	2017	Alouatta caraya	**ON502441.1**	Brazil	2018	Homo sapiens
ON022426.1	Brazil	2017	Cebidae	**ON502401.1**	Brazil	2018	Homo sapiens
MT497525.1	Brazil	2017	Alouatta sp	**ON022371.1**	Brazil	2017	Alouatta caraya
ON022703.1	Brazil	2016	Alouatta sp	**ON022410.1**	Brazil	2017	Callithrix penicillata
ON022591.1	Brazil	2018	Alouatta sp	**ON022403.1**	Brazil	2017	Alouatta guariba clamitans
ON022587.1	Brazil	2018	Alouatta sp	**ON022402.1**	Brazil	2017	Non-human primate
ON022289.1	Brazil	2018	Hg janthinomys capricornii	**ON022419.1**	Brazil	2017	Non-human primate
ON022286.1	Brazil	2018	Hg janthinomys capricornii	**ON022391.1**	Brazil	2017	Alouatta guariba clamitans
ON022305.1	Brazil	2018	Hg janthinomys capricornii	**ON022376.1**	Brazil	2018	Alouatta sp
MH030086.1	Brazil	2017	Alouatta sp	**ON022412.1**	Brazil	2017	Alouatta caraya
ON022593.1	Brazil	2018	Non-human primate	**ON022394.1**	Brazil	2018	Callithrix penicillata
ON022312.1	Brazil	2018	Callithrix	**ON022404.1**	Brazil	2017	Alouatta caraya
ON022584.1	Brazil	2018	Alouatta sp	**ON022396.1**	Brazil	2017	Callithrix penicillata
MK583177.1	Brazil	2018	Homo sapiens	**ON022418.1**	Brazil	2017	Sapajus apella
MH030082.1	Brazil	2017	Alouatta sp	**ON022401.1**	Brazil	2017	Non-human primate
MH030081.1	Brazil	2017	Alouatta sp	**ON022389.1**	Brazil	2017	Cebidae
MH030079.1	Brazil	2017	Alouatta sp	**MH484431.1**	Brazil	2017	Non-human primate
ON022316.1	Brazil	2018	Homo sapiens	**MH666058.1**	Brazil	2016	Sapajus sp
ON022619.1	Brazil	2017	Alouatta sp	**MH666056.1**	Brazil	2016	Alouatta sp
ON022310.1	Brazil	2018	Homo sapiens	**ON022288.1**	Brazil	2016	Non-human primate
ON022290.1	Brazil	2018	Haemagogus leucocelaenus	**ON022700.1**	Brazil	2016	Alouatta sp
ON022580.1	Brazil	2017	Alouatta sp	**MT497523.1**	Brazil	2016	Alouatta sp
ON022615.1	Brazil	2017	Alouatta sp	**MT497524.1**	Brazil	2016	Alouatta sp

GenBank Acession	Country	Year	Source	GenBank Acession	Country	Year	Source
ON022704.1	Brazil	2017	Non-human primate	**ON022311.1**	Brazil	2016	Alouatta sp
ON022614.1	Brazil	2017	Alouatta sp	**MT497520.1**	Brazil	2016	Sapajus sp
ON022386.1	Brazil	2017	Alouatta caraya	**OP508588.1**	Brazil	2022	Non-human primate
ON022693.1	Brazil	2017	Non-human primate	**OP508585.1**	Brazil	2022	Non-human primate
ON022611.1	Brazil	2017	Non-human primate	**OP508582.1**	Brazil	2022	Non-human primate
ON022573.1	Brazil	2017	Alouatta sp	**OP508583.1**	Brazil	2022	Non-human primate
ON022609.1	Brazil	2017	Alouatta sp	**OP508586.1**	Brazil	2022	Non-human primate
ON022566.1	Brazil	2017	Alouatta sp	**OP508581.1**	Brazil	2022	Non-human primate
ON022618.1	Brazil	2017	Non-human primate	**OP508589.1**	Brazil	2022	Non-human primate
ON022692.1	Brazil	2017	Alouatta sp	**OP508580.1**	Brazil	2022	Non-human primate
ON022690.1	Brazil	2017	Alouatta sp	**OP508578.1**	Brazil	2022	Non-human primate
ON022684.1	Brazil	2017	Sapajus	**OP508584.1**	Brazil	2022	Non-human primate
ON022691.1	Brazil	2017	Non-human primate	**OP508577.1**	Brazil	2022	Non-human primate
ON022616.1	Brazil	2017	Alouatta sp	**OP508579.1**	Brazil	2022	Non-human primate
ON022639.1	Brazil	2017	Callithrix	**OL519589.1**	Brazil	2021	Alouatta caraya
ON022589.1	Brazil	2018	Alouatta sp	**OL519588.1**	Brazil	2021	Alouatta caraya
ON022694.1	Brazil	2018	Alouatta sp	**OL519587.1**	Brazil	2021	Alouatta caraya
ON022623.1	Brazil	2017	Alouatta sp	**OQ572696.1**	Brazil	2021	Sabethes chloropterus
ON022378.1	Brazil	2017	Cebidae	**OQ572695.1**	Brazil	2021	Sabethes chloropterus
ON022661.1	Brazil	2018	Non-human primate	**OP508576.1**	Brazil	2021	Non-human primate
ON022710.1	Brazil	2017	Alouatta sp	**OP508574.1**	Brazil	2020	Alouatta caraya
ON022578.1	Brazil	2017	Alouatta sp	**OP508571.1**	Brazil	2020	Callithrix penicillata
ON022617.1	Brazil	2017	Alouatta sp	**OP508572.1**	Brazil	2020	Alouatta caraya
ON022590.1	Brazil	2018	Alouatta sp	**OP508570.1**	Brazil	2020	Callithrix penicillata
ON022687.1	Brazil	2017	Alouatta sp	**OP508575.1**	Brazil	2020	Alouatta caraya
ON022582.1	Brazil	2017	Cebus	**OP508573.1**	Brazil	2020	Alouatta caraya
MH030077.1	Brazil	2017	Alouatta sp	**OP508715.1**	Brazil	2017	Non-human primate
MH030090.1	Brazil	2017	Homo sapiens	**MF370546.1**	Brazil	2017	Alouatta caraya
ON022317.1	Brazil	2018	Homo sapiens	**MF370544.1**	Brazil	2017	Aotus ozzarae infulatus
ON022612.1	Brazil	2017	Non-human primate	**MF370540.1**	Brazil	2017	Alouatta seniculus
ON022708.1	Brazil	2017	Alouatta sp	**MF370541.1**	Brazil	2017	Alouatta sp.
ON022738.1	Brazil	2018	Homo sapiens	**O-022716.1**	Brazil	2004	Homo sapiens
ON022576.1	Brazil	2017	Alouatta sp	**MW158352.1**	Venezuela	2005	Alouatta seniculus
ON022585.1	Brazil	2018	Cebus	**MW158351.1**	Venezuela	2005	Alouatta seniculus
MH018066.1	Brazil	2017	Alouatta sp	**MW158355.1**	Venezuela	2006	Alouatta seniculus
MH018067.1	Brazil	2017	Cebidae sp	**KM388818.1**	Venezuela	2006	Alouatta seniculus
ON022374.1	Brazil	2017	Alouatta sp	**MW158356.1**	Venezuela	2007	Alouatta seniculus
MW034590.1	Brazil	2016	Alouatta caraya	**KM388815.1**	Venezuela	2007	Alouatta seniculus
ON022303.1	Brazil	2017	Non-human primate	**KM388814.1**	Venezuela	2005	Homo sapiens
ON022699.1	Brazil	2017	Alouatta sp	**MW158353.1**	Venezuela	2005	Homo sapiens
ON022696.1	Brazil	2019	Alouatta sp	**MW158354.1**	Venezuela	2005	Homo sapiens
ON022651.1	Brazil	2017	Alouatta sp	**MW158357.1**	Venezuela	2010	Alouatta seniculus

GenBank Acession	Country	Year	Source	GenBank Acession	Country	Year	Source
ON022542.1	Brazil	2018	Homo sapiens	**KM388816.1**	Venezuela	2010	Alouatta seniculus
ON022656.1	Brazil	2018	Alouatta sp	**MW158350.1**	Venezuela	2004	Alouatta seniculus
ON022640.1	Brazil	2017	Alouatta sp	**KM388817.1**	Venezuela	2004	Alouatta seniculus
ON022643.1	Brazil	2017	Alouatta sp	**MK333803.1**	Brazil	2017	Alouatta caraya
ON022683.1	Brazil	2017	Non-human primate	**MF370543.1**	Brazil	2017	Alouatta sp.
ON022608.1	Brazil	2017	Alouatta sp	**KY861728.1**	Brazil	2008	Alouatta sp.
ON022662.1	Brazil	2017	Alouatta sp	**JF912190.1**	Brazil	2002	Homo sapiens
ON022641.1	Brazil	2017	Alouatta sp	**MF370542.1**	Brazil	2017	Alouatta guariba
ON022606.1	Brazil	2017	Non-human primate	**MF370539.1**	Brazil	2017	Sapajus libidinosus
ON022603.1	Brazil	2018	Alouatta sp	**ON022717.1**	Brazil	2000	Homo sapiens
ON022366.1	Brazil	2018	Alouatta sp	**ON022720.1**	Brazil	2000	Homo sapiens
ON022665.1	Brazil	2017	Non-human primate	**JF912188.1**	Brazil	2000	Homo sapiens
ON022695.1	Brazil	2018	Callithrix	**MH018101.1**	Brazil	2003	Homo sapiens
ON022746.1	Brazil	2018	Homo sapiens	**MH018100.1**	Brazil	2003	Homo sapiens
MH030070.1	Brazil	2017	Alouatta sp	**MG969501.1**	Brazil	2001	Homo sapiens
MH030057.1	Brazil	2017	Alouatta sp	**JF912187.1**	Brazil	2000	Homo sapiens
MK583169.1	Brazil	2018	Homo sapiens	**MW158342.1**	Brazil	2000	Homo sapiens
MZ604873.1	Brazil	2018	Homo sapiens	**ON022718.1**	Brazil	2000	Homo sapiens
MK583180.1	Brazil	2018	Homo sapiens	**JF912189.1**	Brazil	2001	Alouatta sp.
MK583174.1	Brazil	2018	Homo sapiens	**MF370545.1**	Brazil	2017	Homo sapiens
MK583159.1	Brazil	2018	Homo sapiens	**MF347613.1**	Suriname	2017	Homo sapiens
MK583171.1	Brazil	2018	Homo sapiens	**MW158367.1**	Trinidad and Tobago	2009	Coquillettidia venezuelensis
MK583170.1	Brazil	2018	Homo sapiens	**MW158365.1**	Trinidad and Tobago	2008	Mansonia titillans
ON022299.1	Brazil	2018	Alouatta sp	**HM582851.1**	Trinidad and Tobago	2009	Alouatta seniculus
MH030071.1	Brazil	2017	Alouatta sp	**MW158366.1**	Trinidad and Tobago	2009	Culex spissipes
MK583150.1	Brazil	2018	Homo sapiens	**MW158364.1**	Trinidad and Tobago	2009	Coquillettidia venezuelensis
ON022297.1	Brazil	2018	Sapajus	**MW158349.1**	Venezuela	2004	Alouatta seniculus
MH030074.1	Brazil	2017	Alouatta sp	**MW158348.1**	Trinidad and Tobago	1995	Haemagogus sp.
MK583173.1	Brazil	2018	Homo sapiens	**MW158346.1**	Trinidad and Tobago	1989	Sabethes chloropterus
ON022349.1	Brazil	2018	Cebus	**MW158345.1**	Trinidad and Tobago	1988	Haemagogus janthinomys
ON022625.1	Brazil	2017	Alouatta sp	**MW158347.1**	Trinidad and Tobago	1989	Alouatta sp.
MZ604861.1	Brazil	2018	Homo sapiens	**ON022722.1**	Brazil	1993	Homo sapiens
MH030080.1	Brazil	2017	Alouatta sp	**JF912185.1**	Brazil	1992	Sabethes sp.
ON022742.1	Brazil	2018	Homo sapiens	**JF912182.1**	Brazil	1984	Homo sapiens
MZ604866.1	Brazil	2018	Homo sapiens	**MW158344.1**	Brazil	1985	Haemagogus janthinomys
MZ604840.1	Brazil	2018	Homo sapiens	**JF912180.1**	Brazil	1981	Homo sapiens
ON022574.1	Brazil	2017	Alouatta sp	**MW158343.1**	Brazil	1973	Haemagogus sp.
ON022701.1	Brazil	2016	Alouatta sp	**MW158341.1**	Brazil	1991	Alouatta sp.
MN117917.1	Brazil	2017	Ochlerotatus scapularis	**JF912186.1**	Brazil	1994	Homo sapiens
ON022702.1	Brazil	2016	Sapajus	**JF912184.1**	Brazil	1987	Homo sapiens
ON022301.1	Brazil	2016	mosquito	**JF912179.1**	Brazil	1980	Haemagogus sp.
ON022302.1	Brazil	2016	mosquito	**JF912183.1**	Brazil	1984	Homo sapiens

GenBank Acession	Country	Year	Source	GenBank Acession	Country	Year	Source
MH666057.1	Brazil	2017	Alouatta sp	**MW158340.1**	Brazil	1968	Saguinus midas
MH666060.1	Brazil	2017	Haemagogus janthinomys	**MW158338.1**	Brazil	1955	Sentinel monkey
MH666059.1	Brazil	2017	Haemagogus leucocelaenus	**MW158339.1**	Brazil	1960	Cebus sp.
ON022300.1	Brazil	2017	mosquito	**MW158361.1**	Peru	1995	Homo sapiens
MH018082.1	Brazil	2017	Callithrix sp	**MW158359.1**	Peru	1998	Homo sapiens
MH018065.1	Brazil	2017	Cebidae sp	**MF004382.1**	Bolivia	1999	Homo sapiens
JF912181.1	Brazil	1983	Homo sapiens	**KF907504.1**	Bolivia	1999	Homo sapiens



Appendix Figure. Study area related to investigation of yellow fever virus in mosquitoes from rainforest bordering Manaus, Brazil, 2022. A) Location of Manaus in Brazil. B) The Adolpho Ducke Forest Reserve bordering the city of Manaus, with location of sampling sites (blue dots).