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List of Abbreviations

\$	dollar
µg	microgram
µl	microlitre
µM	micromolar
µm	micromoles
~	approximately
(+)ssRNA	positive sense single stranded ribonucleic acid
aa	amino acid
ADB	Asian Development Bank
3CL ^{pro}	chymotrypsin-like protease
AGRF	Australian Genome Research Facility
AU-Rich	adenine and uracil rich
AUS	Australia
BMV	bromomosaic virus
bp	base pairs
cDNA	complimentary deoxyribonucleic acid
CP	capsid protein gene
C-terminal	carboxy-terminal
CSIRO/LI	Commonwealth Scientific and Industrial Research Organisation/ Livestock Industries
DNA	deoxyribonucleic acid
dsRNA	double-stranded ribonucleic acid
EDTA	ethylenediamine tetraacetic acid
FMDV	foot and mouth disease virus
g	gram
GAV	gill-associated virus
GC-Rich	guanine and cytosine-rich
gp116	glycoprotein 116
gp64	glycoprotein 64
H ₀	no recombination
H ₁	hypothesis of recombination
H & E	haematoxylin and Eosin
HCV	hepatitis C virus
HIV	human immunodeficiency virus
IBV	infectious bronchitis virus
IND	India
IGR	inter gene region
IHC	immuno-histochemistry
IHHNV	infectious hypodermal and hematopoietic necrosis virus
IDN	Indonesia
ISH	<i>in situ</i> hybridisation
kb	kilobase
kbp	kilobase pairs
kDa	kilodalton
LDV	lactate dehydrogenase elevating virus
LO	lymphoid organ
LOV	lymphoid organ virus
M	marker
MAb	monoclonal antibody
MBP	maltose-binding protein

MHV	mouse hepatitis virus
mM	millimolar
mols	moles
MOZ	Mozambique
MP-Tree	maximum parsimony tree
Mr	Migration of relative mass
mRNA	messenger ribonucleic acid
MSGV	monodon slow growth virus
MYS	Malaysia
NARA	National Aquatic Resources Research and Development Agency
nt	nucleotide
N-terminal	amino-terminal
NEIA	nitrocellulose-enzyme immunoassay
NJ-Tree	neighbour-joining tree
nM	nanomolar
OIE	Office International des Epizooties
ORF	open reading frame
pI	isoelectric point
p20	nucleoprotein gene
PCR	polymerase chain reaction
PL	postlarvae
PL ^{pro}	papain-like protease
pmol	picomoles
PRCV	porcine respiratory coronavirus
RdRp	RNA-dependent RNA polymerase
RNA	ribonucleic acid
rpm	revolutions per minute
RT-PCR	reverse transcriptase- polymerase chain reaction
S	coronavirus spike glycoprotein
SARS-CoV	severe atypical respiratory syndrome-coronavirus
sg	subgenomic
sgmRNA	subgenomic messenger ribonucleic acid
SPF	specific pathogen free
TCID ₅₀	tissue culture infectious dose 50% endpoint
TEM	transmission electron microscopy
TGEV	transmissible gastroenteritis virus
THA	Thailand
TM	transmembrane
Tm	melting temperature
Tris	tris-hydroxymethyl-aminomethane
TSV	Taura Syndrome Virus
Tween20	polyoxyethylene (20) sorbitan monolaurate
TWN	Taiwan
UV	ultra-violet
VNM	Vietnam
WSSV	white spot syndrome virus
YHc RT-nested PCR	yellow head consensus reverse transcriptase-nested polymerase chain reaction
YHc qRT-PCR	yellow head consensus quantitative reverse transcriptase-polymerase chain reaction
YHD	yellow head disease
YHDLV	yellowhead disease-like virus
YHV	yellow head virus