

Abbreviations

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| Å | Angstrom (a unit of length equal to 1 hundred-millionth of a centimetre, or 1 hundredth of a nanometre) |
| AA | <i>Aedes albopictus</i> (cells) amino acid |
| AAVLD | American Association of Veterinary Laboratory Diagnosticians |
| ABADRL | Arthropod-Borne Animal Diseases Research Laboratory (USDA/ARS, USA) |
| ac-ELISA | antigen capture ELISA |
| ACIAR | Australian Centre for International Agricultural Research |
| AcNPV | nuclear polyhedrosis virus of <i>Autographa californica</i> |
| AFSSA | French Agency for Food Safety (<i>Agence française de Sécurité sanitaire des Aliments</i>) |
| AGE | agarose gel electrophoresis |
| AGID | agar gel immunodiffusion |
| AHS | African horse sickness |
| AHSV | African horse sickness virus |
| AKAV | Akabane virus |
| AMV | avian myeloblastosis virus |
| ANDV | Andasibe virus |
| ANOVA | analysis of variance |
| APC | antigen presenting cells |
| APHIS | Animal and Plant Health Inspection Service (USDA) |
| AQIS | Australian Quarantine and Inspection Service |
| ARC | Agricultural Research Council, Onderstepoort, South Africa |
| ARS | Agricultural Research Service (USDA) |
| asl | above sea level |
| ASL | local veterinary office (<i>Azienda sanitaria locale</i>), Italy |
| AVHRR | advanced very high resolution radiometer |
| AWS | automatic weather station |
| BAV | Banna virus |
| BCS | blind calf syndrome |
| BHK | baby hamster kidney |
| Bm-1 CPV | <i>Bombyx mori</i> cytoplasmic polyhedrosis virus-1 |
| bp | base pair |
| BSR | a clone of baby hamster kidney cell |
| BT | bluetongue |
| BTV | bluetongue virus |
| CCF | cross-correlation function |
| CCID | cell culture infective dose |
| cDNA | complementary DNA |
| CEID | chick embryo infective dose |
| c-ELISA | competitive ELISA |
| CESME | National Reference Centre for Exotic Diseases, Teramo, Italy (<i>Centro Studi Malattie Esotiche</i>) |

Abbreviations

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| CFIA | Canadian Food Inspection Agency |
| CFT | complement fixation test |
| cfu | colony-forming unit |
| CGLV | Changuinola virus |
| CGV | Chobar Gorge virus |
| CIRAD | Centre for international co-operation in agronomic research for development, France (<i>Centre de coopération internationale en recherche agronomique pour le développement</i>) |
| CLP | core-like particle |
| CNUV | Chenuda virus |
| COI | cytochrome oxidase subunit I |
| CORV | Corriparta virus |
| COV | Codajas virus |
| CPAE | calf pulmonary artery endothelium |
| CPE | cytopathic effect |
| CPV | cytoplasmic polyhedrosis virus |
| CRI | clinical reaction index |
| Cryo-EM | cryoelectron micrographs |
| CT | cycle threshold |
| CTFV | Colorado tick fever virus |
| CTL | cytotoxic T lymphocyte |
| CVO | Chief Veterinary Officer |
| DB | dissemination barrier |
| DC | dendritic cells |
| DDSV | Departmental Directorate of Veterinary Services, France (<i>Direction départementale des services vétérinaires</i>) |
| DEM | digital elevation model |
| DGAL | National Food Directorate, France (<i>Direction générale de l'Alimentation</i>) |
| DIA | dot immunobinding assay |
| DMEM | Dulbecco's modified Eagle's medium |
| DNA | deoxyribonucleic acid |
| dpi | days post infection |
| ds | double-stranded |
| dsRNA | double-stranded RNA |
| EC | European Commission |
| ECE | embryonated chicken egg |
| EDTA | ethylene-diaminetetra-acetic acid |
| EEA | European Environment Agency |
| EEV | equine encephalosis virus |
| EGF | epidermal growth factor |
| EHD | epizootic haemorrhagic disease of deer |
| EHDV | epizootic haemorrhagic disease of deer virus |
| EI | extrinsic incubation period |
| EID | Interdepartmental group for mosquito control (<i>Entente interdépartementale pour la démoustication</i>) |
| ELD | egg lethal dose |
| ELISA | enzyme-linked immunosorbent assay |
| EM | electron microscopy |

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| EMBL | European Molecular Biology Laboratory |
| EMEM | Eagle's minimum essential medium |
| ENSO | El Niño/Southern Oscillation |
| epg | eggs per gram |
| ER | endoplasmic reticulum |
| EST | expressed sequence tag |
| EU | European Union |
| EUBV | Eubenangee virus |
| EXANDIS | Exotic Animal Disease Preparedness Program, Australia |
| FAO | Food and Agriculture Organization |
| FBS | foetal bovine serum |
| FCS | foetal calf serum |
| fg | femtogram |
| FP | forward primer |
| FRET | fluorescence resonance energy transfer |
| GEL | gelsolin |
| GI | GenInfo identifier |
| GIS | geographic information system global imaging system |
| GIV | Great Island virus |
| GPS | global positioning system |
| GuSCN | guanidine thiocyanates |
| HCT | haematocrit |
| HD | haemorrhagic disease hydrophobic domain |
| HGB | haemoglobin |
| HI | haemagglutination inhibition |
| HIT | herd immunity threshold |
| Hyg B | hygromycin B |
| IAH | Institute for Animal Health, Pirbright, United Kingdom |
| IB | Ibaraki |
| ICTV | International Committee for the Taxonomy of Viruses |
| IDW | inverse distance weighted |
| i-ELISA | indirect ELISA |
| IERIV | Ieri virus |
| IETS | International Embryo Transfer Society |
| IF | immunofluorescence |
| IFEV | Ife virus |
| IF/R-1 | internal primers |
| IGM | Military Geographical Institute, Santiago, Chile (<i>Instituto Geográfico Militar</i>) |
| IL | interleukin |
| INTA | National Institute of Agricultural Technology, Argentina (<i>Instituto Nacional de Tecnología Agropecuaria</i>) |
| IP | immunoperoxidase infection prevalence |
| ISVP | infectious subviral particles |
| ITS | internal transcribed spacer |

Abbreviations

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| ITUV | Itupiranga virus |
| IU | international unit |
| IZS | Istituto Zooprofilattico Sperimentale, Italy |
| IZSA&M | Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise 'G. Caporale', Teramo, Italy |
| JAPV | Japanaut virus |
| JE | Japanese encephalitis |
| kD | kiloDalton |
| KDV | Kadipiro virus |
| KMPV | Kammavanpettai virus |
| KNMI | Royal Netherlands Meteorological Institute, De Bilt, The Netherlands (<i>Het Koninklijke Nederlands Meteorologisch Instituut</i>) |
| KOH | potassium hydroxide |
| L1 | large segment |
| LCV | Lake Clarendon virus |
| LD | lethal dose |
| LDCC | Local Disease Control Centre, Italy |
| LDR | light-dependent resistor |
| LEBV | Lebombo virus |
| LED | light-emitting diode |
| LOD | limit of detection |
| LSD | least significant difference |
| LST | land surface temperature |
| M4 | medium segment |
| MAb | monoclonal antibody |
| MARU | Middle America Research Unit |
| MATV | Matucare virus |
| MCH | mean cellular haemoglobin content by mass |
| MCHC | mean cellular haemoglobin concentration |
| MCV | mean red blood cell volume |
| MEB | mid-gut escape barrier |
| MeHgOH | methyl mercury hydroxide |
| MEM | minimum essential medium |
| MEVP | membrane enveloped virus particles |
| MIB | mid-gut infection barrier |
| MIR | middle infra-red reflectance |
| MLV | modified-live virus |
| MMLV | Moloney murine leukaemia virus |
| MMOH | methyl mercury hydroxide |
| MODIS | moderate resolution imaging spectroradiometer |
| mRNA | messenger ribonucleic acid |
| MRV | mammalian orthoreovirus |
| mtDNA | mitochondrial DNA |
| MTSN | microtitre serum neutralisation |
| MTT | 3-(4,5, dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide |
| NAMP | National Arbovirus Monitoring Program, Australia |
| NAMRU | Naval Medical Research Unit, USA |

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| NAQS | Northern Australia Quarantine Strategy |
| NASA | National Aeronautics and Space Administration, USA |
| NCBI | National Center for Biotechnology Information, USA |
| NDCC | National Disease Control Centre, Italy |
| NDEV | Ndelle virus |
| NDVI | normalised difference vegetation index |
| NERC | Natural Environmental Research Council, Oxford, UK |
| NIS | National Information System, Italy |
| NLRV | Nilaparvata lugens reovirus |
| nPCR | nested PCR |
| NS | non-structural |
| NS1 | non-structural (virus protein) 1 |
| NSP | non-structural protein |
| NSW | New South Wales, Australia |
| NT | nucleotide |
| NTC | no template control |
| NVSL | National Veterinary Services Laboratory, Ames, USA |
| OBP | Onderstepoort Biological Products, Onderstepoort, South Africa |
| OD | optical density |
| OIE | Office International des Epizooties (World Organisation for Animal Health) |
| opg | oocysts per gram |
| ORUV | Orungo virus |
| OVI | Onderstepoort Veterinary Institute, Onderstepoort, South Africa |
| PALV | Palyam virus |
| PAUP | phylogenetic analysis using parsimony |
| PBMC | peripheral blood mononuclear cells |
| PBS | phosphate-buffered saline |
| pc | post challenge |
| PCB | printed circuit board |
| PCR | polymerase chain reaction |
| pfu | plaque-forming units |
| pg | picogram |
| PHSV | Peruvian horse sickness virus |
| pi | post inoculation |
| P _i | monophosphate |
| pI | post infection |
| PP _i | pyrophosphate |
| PSEK | porcine stable equine kidney |
| pv | post vaccination |
| R&D | research and development |
| RAPD | random amplification of polymorphic DNA |
| RAPID | ruggedised advanced pathogen identification device |
| RBC | red blood cell |
| RDCC | Regional Disease Control Centre, Italy |
| RDV | rice dwarf virus |
| RE | restriction endonuclease digest |

Abbreviations

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| RELSU | Reggio Emilia Local Sanitary Unit, Italy |
| REML | restricted maximum likelihood |
| RNA | ribonucleic acid |
| RPL | ribosomal protein L |
| RRSV | rice ragged stunt virus |
| RSA | Republic of South Africa |
| RT | reverse transcriptase |
| RV | rotavirus |
| S7 | small segment |
| SC | seroconversion |
| SCC | somatic cell count |
| SCRV | St Croix River virus |
| SeaWiFS | Sea-viewing Wide Field-of-view Sensor (NASA) |
| SECYT | Science and Technology Secretary, Argentina (<i>Secretaría de Ciencia, Tecnología e Innovación Productiva</i>) |
| sem | standard error means |
| SENASA | National Animal Health Service, Argentina (<i>Servicio Nacional de Sanidad y Calidad Agroalimentaria</i>) |
| SGEB | salivary gland escape barrier |
| SGIB | salivary gland infection barrier |
| SN | serum neutralisation |
| SNT | serum neutralisation test |
| SPF | specific pathogen-free |
| SPM | spatial process model |
| SPS | serologically positive sentinel |
| SR | seroconversion rate |
| ssRNA | single-stranded RNA |
| STD | standard deviation |
| TAIR | air temperature |
| TC | tissue culture transcriptase complex |
| TCID | tissue cell infective dose |
| TF/R-1 | terminal primers |
| T _m | temperature |
| TMEV | Tembe virus |
| TNF | tumour necrosis factor |
| TOT | transovarial transmission |
| TOTB | transovarial transmission barrier |
| TPF | total photon flux |
| TRV | Tracambe virus |
| UK | United Kingdom |
| UMAV | Umatilla virus |
| UNESP | University of São Paulo State, Brazil (<i>Universidade Estadual Paulista 'Júlio Mesquita Filho'</i>) |
| UNMIK | United Nations interim administration mission in Kosovo |
| USA | United States of America |
| USAHA | United States Animal Health Association |

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| USDA | United States Department of Agriculture |
| VAERS | Vaccine Adverse Event Reporting System (Centers for Disease Control and Prevention and the Food and Drug Administration, USA) |
| Vero (cell lines) | African green monkey cell lines |
| VI | virus isolation |
| VIB | viral inclusion bodies |
| VLP | virus-like particle |
| VMRD | Veterinary Medical Research and Development, Pullman, United States of America |
| VN | virus neutralisation virus neutralising |
| VNT | virus neutralisation test |
| VP | viral protein virion protein |
| VS | viral suspension |
| v/v | volume/volume |
| WALV | Wallal virus |
| WARV | Warrego virus |
| WC-1 | white collar-1 |
| WGRV | Wongorr virus |
| WHO | World Health Organization |
| WMV | Wad Medani virus |
| WTO | World Trade Organization |
| YOV | Yunnan orbivirus |