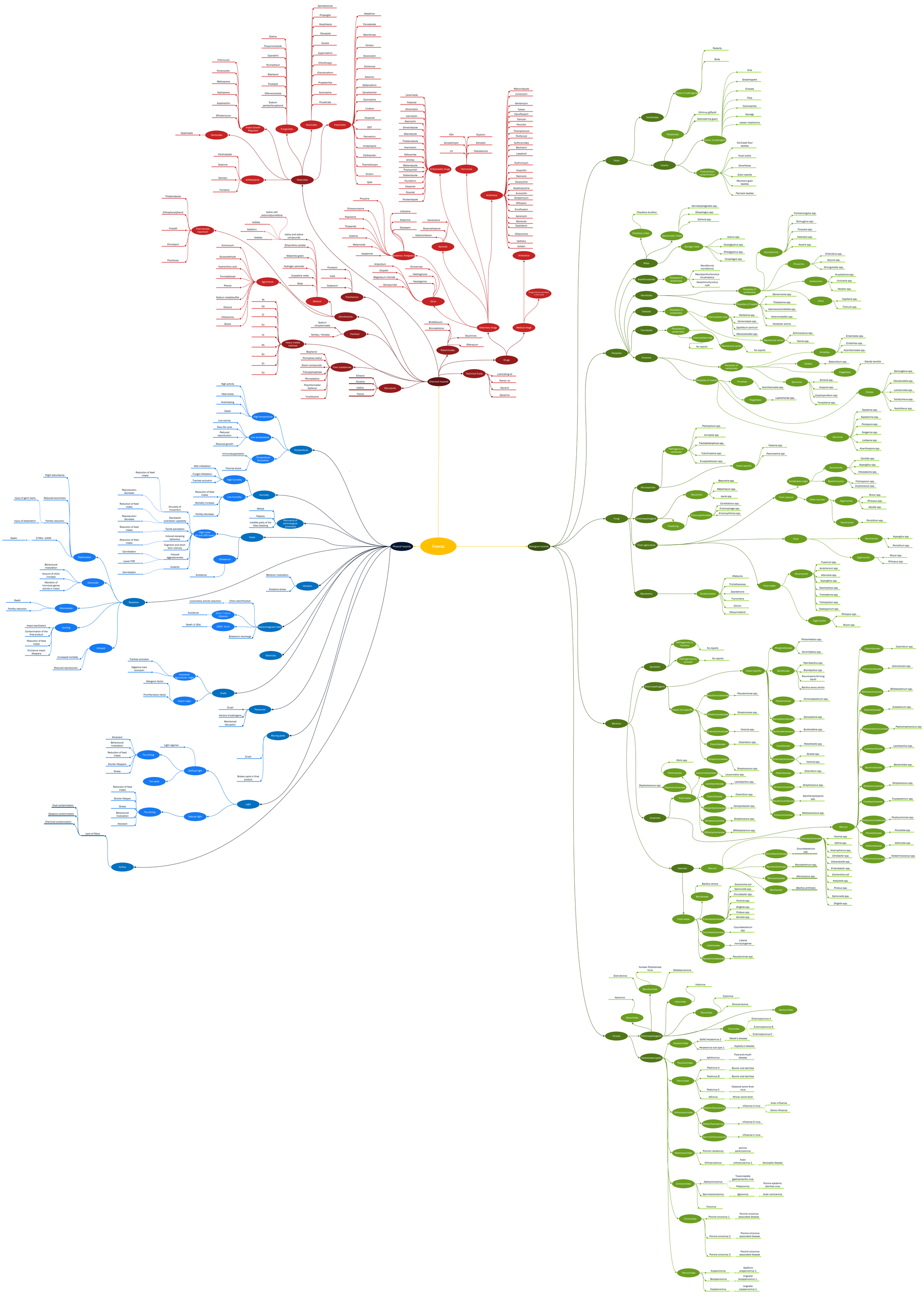
Insects
Pesticides
Insecticides
Malathion
Fenvalerate
Metrifonate
Fention
Doramectin
Dichlorvos
Diazinon
Deltamethrin
Camphechlor
Cyromazine
Lindane
Closantel
DDT
Permethrin
Imidaclopri
Clothianidin
Thiamethoxam
Cinerin
TEPP
Acaricides
Spirotetramat
Propargite
Hexythiazox
Etoxazole
Dicofol
Cypermethrin
Chlorfenapyr
Chlordimeform
Propetamfos
Cyromazine
Fluvalinate
Fungicides
Dodine
Fluquinconazole
Cyprodinil
Pyrimethanil
Bitertanol
Flusilazol
Difenoconazole
Sodium pentachlorophenol
Insect Growth Regulator
Triflumuron
Pyriproxyfen
Methoprene
Hydroprene
Azadirachtin
Diflubenzuron
Herbicides
Glyphosate
Antifeedants
Fentinacetat
Solanine
Dermisin
Tomatine
Post harvest treatment
Thiabendazole
Orthophenylphenol
Imazalil
Pirimetanil
Prochloraz
Agriculture
Ammonium
Glutaraldehyde
Hydrochloric acid
Formaldehyde
Phenol
Sodium metabisulfite
Ethanol
Chloramine
Ozone
Iodine with polyvinylpyrrolidone
Iodides
Iodoform
Iodates
Iodine and iodine compounds
Ethacridine Lactate
Malachite green
Hydrogen peroxide
Crystalline violet
Soap
Medical
Putrescin
Indol
Cadaverin
Putrefaction
Disinfectants
Heavy metals residues
As
Cd
Cr
Cu
Ni
Pb
Sn
Zn
Co
Fertilizer
Sodium nitrophenolate
Nitrites / Nitrates
Toxic substances
Bisphenol
Pirimiphos-methyl
Dioxin compounds
Tributylphosphate
Microplastics
Polychlorinated biphenyl
Vinyltoluene
Stimulants
Ethanol
Nicotine
Caffein
Theine
Chemical hazards
Antiparasitic drugs
Levamisole
Febantel
Doramectin
Ivermectin
Abamectin
Dimetridazole
Albendazole
Thiabendazole
Avermectin
Rafoxanide
Amitraz
Mebendazole
Praziquantel
Oxibendazole
Flumethrin
Closantel
Pyrantel
Fenbendazole
Hormones
FSH
Gonadotropin
LH
Oxytocin
Estradiol
Testosterone
Antibiotics
Metronidazole
Lincomycin
Gentamycin
Tylosin
Danofloxacin
Tiamulin
Penicillin
Thiamphenicol
Florfenicol
Sulfonamides
Bacitracin
Lasalocid
Erythromycin
Ampicillin
Neomycin
Doxycycline
Oxytetracycline
Amoxicillin
Streptomycin
Difloxacin
Enrofloxacin
Apramycin
Monensin
Cephalexin
Cefquinome
Ceftiofur
Colistin
Antibiotics
Drugs that are excreted in the urine
Medical drugs
Veterinary drugs
Procaine
Chlorpromazine
Piperazine
Thiopental
Xylazine
Metamizole
Azaperone
Lidocaine
Ketamine
Diazepam
Nandrolone
Dexamethasone
Hydrocortisone
Steroids
Sedative/ Analgesic
Amprolium
Clopidol
Magnesium chloride
Decoquinate
Dinitolmide
Halofuginone
Neostigmine
Other
Brodifacoum
Bromadiolone
Rodenticides
Strychnine
Difenacum
Drugs
Technical fluids
Lubricating oil
Petrol/ oil
Glycerol
Glycerine
Physical hazards
Temperature
High temperature
High activity
Heat stress
Overheating
Death
Low temperature
Low activity
Slow life cycle
Reduced reproduction
Reduced growth
Temperature fluctuation
Immunosuppression
Thermal shock
Humidity
High humidity
Mite infestation
Fungal infestation
Trachea occlusion
Low humidity
Reduction of feed intake
Mortality increase
Fertility decrease
Noise
Reminants of technological processes
Metals
Plastics
Inedible parts of the litter/bedding
High noise (12 and 200 beats)
Reduction of feed intake
Sinuosity of movement
Reproduction decrease
Decreased orientation capability
Reduction of feed intake
Tactile perception
Reproduction decrease
Reduction of feed intake
Induced escaping bahaviour
Cognition and short-term memory
Cannibalism
Induced aggressiveness
Lower FCR
Audacity
Cannibalism
Ultrasound
Avoidance
Vibration
Behavior modulation
Oxidative stress
Electromagnetic field
Locomotory activity reduction
Chitin electrification
0.5-1.7 kV/m (Tabanus)
Avoidance
2000 kV/m
Death (1-30s)
Bioelectric discharge
Electricity
Dusts
Industrial/ Agricultural origin
Trachea occlusion
Digestive tract occlusion
Insect origin
Allergenic factor
Proinflamatory factor
Personnel
Crush
Vectors of pathogens
Mechanical disruption
Moving parts
Crush
Broken parts in final product
Light
Artificial light
Light regimen
Too strong
Attractant
Behavioural modulation
Reduction of feed intake
Shorter lifespans
Stress
Too weak
Natural light
Too strong
Reduction of feed intake
Shorter lifespan
Stress
Behavioural modulation
Atractant
Airflow
Lack of filters
Dust contamination
Gaseous contamination
Chemical contamination
Radiation
Radiowaves
Flight disturbance
Reduced locomotion
Injury of germ band
Fertility reduction
Injury of blastoderm
27MHz -12KW
Death
Ultraviolet
Behavioural modulation
Amount of chitin increase
Alteration of hormonal genes activity in insect
Microwaves
Death
Fertility reduction
Ionizing
Insect sterilization
Contamination of the final product
Reduction of feed intake
Enchance insect lifespans
Infrared
Increased mortality
Reduced reproduction
Biological hazards
Pests
Vertebrates
vector of pathogens
Rodents
Birds
Parasitoids
Dirhinus giffardii
Scleroderma guani
Insects
vector of pathogens
Ants
Grasshoppers
Crickets
Flies
Cockroaches
Earwigs
Lesser mealworms
Final product contamination
Confused flour beetles
Food moths
Silverfishes
Grain weevils
Merchant grain beetles
Flat bark beetles
Mites
Predatory mites
Cheyletus eruditus
Opportunistic mites
Dermatophagoides spp.
Glicephagus spp.
Goheria spp.
Storage mites
Acarus spp.
Carpoglyphus spp.
Rhizoglyphus spp.
Tyrophagus spp.
Acanthocephala
Parasites of vertebrates
Monilliformis monilliformis
Macracanthorhynchus hirudinaceus
Neoechinorhynchus rutili
Nematoda
Parasites of vertebrates
Roundworms
Trichostrongylus spp.
Strongylus spp.
Toxocara spp.
Heterakis spp.
Ascaris spp.
Pinworms
Enterobius spp.
Oxyuris spp.
Strongyloides spp.
Hookworms
Ancylostoma spp.
Uncinaria spp.
Necator spp.
Other
Capillaria spp.
Trichuris spp.
Parasites of insects
Steinernema spp.
Thelastoma spp.
Hammerschmidtiella spp.
Heterorhabditis spp.
Horsehair worms
Cestoda
Parasites of vertebrates
Intermediate host
Raillietina spp.
Hymenolepis spp.
Dypilidium caninum
Mesocestoides spp.
Trematoda
Parasites of vertebrates
Intermediate host
No reports
Mechanical vector
No reports
Mechanical vector
Echinococcus spp.
Teania spp.
Parasites
Protozoa
Parasites of vertebrates
Amoebas
Entamoeba spp.
Endolimax spp.
Acanthamoeba spp.
Ciliates
Balantidium spp.
Flagellates
Giardia lamblia
Parasites of insects
Amoebas
Acanthamoeba spp.
Flagellates
Lophomonas spp.
Sporozoa
Eimeria spp.
Isospora spp.
Cryptosporidium spp.
Toxoplasma spp.
Ciliates
Ophryoglena spp.
Clevelandella spp.
Lambornella spp.
Tetrahymena spp.
Nyctotherus spp.
Sporozoa
Septatina spp.
Septatorina spp.
Porospora spp.
Gregarine spp.
Leidyana spp.
Acanthospora spp.
Microsporidia
Pathogenic to vertebrate
Pleistophora spp.
Annecaliia spp
Trachipleistophora spp.
Tubulinosema spp.
Encephalitozoon spp.
Insect specific
Nosema spp.
Paranosema spp
Fungi
Entomopathogenic
Biocontrol
Beauveria spp.
Metarhizium spp.
Isaria spp.
Freeliving
Entomophthorales
Conidiobolus spp.
Entomophaga spp.
Entomophthora spp.
From manure
Vertebrates origin
Ascomycota
Candida spp.
Aspergillus spp.
Histoplasma spp.
Basidiomycota
Trichosporon spp.
Cryptococcus spp.
Other sources
Zygomycota
Mucor spp.
Rhizopus spp.
Absidia spp.
Ascomycota
Penicillium spp.
From agriculture
Feed
Ascomycota
Aspergillus spp.
Penicillium spp.
Zygomycota
Mucor spp.
Rhizopus spp.
Food waste
Ascomycota
Fusarium spp.
Aceremonium spp.
Alternaria spp.
Aspergillus spp.
Stachybotrys spp.
Trichoderma spp.
Trichophyton spp.
Cladosporium spp.
Zygomycota
Rhizopus spp.
Mucor spp.
Mycotoxins
Contamination
Aflatoxins
Trichothecenes
Zearalenone
Fumonisins
Citrinin
Deoxynivalenol
Bacteria
Symbiotic
Pathogenicity to humans
No reports
Pathogenicity to animals
No reports
Entomopathogenic
Insect specific
Morganellaceae
Photorhabdus spp.
Xenorhabdus spp.
Bacillaceae
Paenibacillus spp.
Brevibacillus spp.
Round-spore-forming bacilli
Bacillus sensu stricto
Nesseriaceae
Chromobacterium spp.
Spiroplasmataceae
Spiroplasma spp.
Burkholderiaceaceae
Burkholderia spp.
Coxiellaceae
Rickettsiella spp.
Enterobacteriaceae
Serratia spp.
Yersinia spp.
Clostridiaceae
Clostridium spp.
Streptococcaceae
Streptococcus spp.
Pseudonocardiaceae
Saccharopolyspora spp.
Enterococcaceae
Melissococcus spp.
Insect non-specific
Pseudomonadaceae
Pseudomonas spp.
Streptomycetaceae
Streptomyces spp.
Enterobacteriaceae
Yersinia spp.
Clostridiaceae
Clostridium spp.
Streptococcaceae
Streptococcus spp.
Anaerobic
Staphylococcus spp.
Staphylococcaceae
Vibrio spp.
Vibrionaceae
Food waste
Leuconostocaceae
Leuconostoc spp.
Lactobacillaceae
Lactobacillus spp.
Clostridiaceae
Clostridium spp.
Campylobacteraceae
Campylobacter spp.
Streptococcaceae
Streptococcus spp.
Bifidobacteriaceae
Bifidobacterium spp.
Manure
Clostridiaceae
Clostridium spp.
Actinomycetaceae
Actinomyces spp.
Bifidobacteriaceae
Bifidobacterium spp.
Eubacteriaceae
Eubacterium spp.
Peptostreptococcaceae
Peptostreptococcus spp.
Lactobacillaceae
Lactobacillus spp.
Bacteroidaceae
Bacteroides spp.
Streptococcaceae
Streptococcus spp.
Fusobacteriaceae
Fusobacterium spp.
Porphyromonadaceae
Porphyromonas spp.
Prevotellaceae
Prevotella spp.
Veillonellaceae
Veillonella spp.
Acidaminococcaceae
Acidaminococcus spp.
Enterobacteriaceae
Yersinia spp.
Hafnia spp.
Arsenophorus spp.
Citrobacter spp.
Edwardsiella spp.
Enterobacter spp.
Escherichia coli
Klebsiella spp.
Proteus spp.
Salmonella spp.
Shigella spp.
Aerobic
Manure
Corynebacteriaceae
Corynebacterium spp.
Mycobacteriaceae
Mycobacterium spp.
Micrococcaceae
Micrococcus spp.
Bacillaceae
Bacillus anthracis
Food waste
Bacillaceae
Bacillus cereus
Enterobacteriaceae
Escherichia coli
Salmonella spp.
Cronobacter spp.
Yersinia spp.
Shigella spp.
Proteus spp.
Serratia spp.
Corynebacteriaceae
Corynebacterium spp.
Listeriaceae
Listeria monocytogenes
Pseudomonadaceae
Pseudomonas spp.
Viruses
Entomopathogenic
Baculoviridae
Granulovirus
Nuclear Polyhedrosis Virus
Deltabaculovirus
Ascoviridae
Ascovirus
Iridoviridae
Iridovirus
Reoviridae
Cypovirus
Dinovernavirus
Densoviridae
Poxviridae
Entomopoxvirus A
Entomopoxvirus B
Entomopoxvirus C
Vertebrates-specific
Herpesviridae
Gallid herpesvirus 2
Marek's disease
Herpesvirus suis type 1
Aujeszky's disease
Picornaviridae
Aphthovirus
Foot-and-mouth disease
Flaviviridae
Pestivirus A
Bovine viral diarrhea
Pestivirus B
Bovine viral diarrhea
Pestivirus C
Classical swine fever virus
Asfivirus
African swine fever
Orthomyxoviridae
Alphainfluenzavirus
Influenza A virus
Avian influenza
Swine influenza
Deltainfluenzavirus
Influenza D virus
Gammainfluenzavirus
Influenza C virus
Paramyxoviridae
Porcine rubulavirus
porcine paramyxovirus
Orthoavulavirus
Avian orthoavulavirus 1
Newcastle disease
Coronaviridae
Alphacoronavirus
Transmissible gastroenteritis virus
Pedacovirus
Porcine epidemic diarrhea virus
Gammacoronavirus
Igacovirus
Avian coronavirus
Torovirus
Circoviridae
Porcine circovirus 1
Porcine circovirus associated disease
Porcine circovirus 2
Porcine circovirus associated disease
Porcine circovirus 3
Porcine circovirus associated disease
Parvoviridae
Aveparvovirus
Galliform aveparvovirus 1
Bocaparvovirus
Ungulate bocaparvovirus 1
Copiparvovirus
Ungulate copiparvovirus 1