



ADVISORY COMMITTEE ON DANGEROUS PATHOGENS
Approved List of Human Pathogens 2011

Issue

The revised Approved List of Biological Agents is provided for members' consideration and approval.

Background

The HSE is proceeding with work on the Legislative Reform (Contained Use of Animal Pathogens) Order (LRO) that will give HSE powers to regulate contained use work with animal pathogens under the Health and safety at Work etc Act 1974. The aim is for the LRO to be in place by summer 2011, subject to parliamentary scrutiny procedures. This will not in itself change any requirements on those working with human and animal pathogens or Genetically Modified Microorganisms (GMMs). HSE will then be able to introduce new Regulations to provide a single regulatory framework that will encompass contained use work with human and animal pathogens and GMMs. Members will recall earlier discussions on this topic. However, the detail has still not been finalised and therefore it is not possible to present the revision to the Approved List of human pathogens as though it were part of the new single regulatory framework, with all pathogens, human, animal and GMMs under a single listing with their approved containment category. Therefore, human pathogens and their hazard groups only are presented here.

At the previous meeting of ACDP, Members commented upon an earlier draft of this document. Since then, the layout of the List has been restructured to provide clarity and ease of use for those assessing the risk of handling biological agents in contained use. Consultation with relevant experts has been undertaken to ensure that taxonomic nomenclature reflects current convention and advice sought from multiple reference laboratories within the Health Protection Agency Microbiology Services, the Veterinary Laboratories Agency, University of Liverpool, and the TSE Working Group.

Action

Members are asked to consider and approve the revised Approved List of Biological Agents.

Secretariat

January 2011

THE APPROVED LIST OF BIOLOGICAL AGENTS

Quick link to biological agents listed alphabetically:

A	B	C	D	E	F	G	H	I	J	K	L	M
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

BACTERIA

Biological agent	Human pathogen Hazard Group	Notes
<i>Actinobacillus actinomycetemcomitans</i>	2	
<i>Actinomadura madurae</i>	2	
<i>Actinomadura pelletieri</i>	2	
<i>Actinomyces gerencseriae</i>	2	
<i>Actinomyces israelii</i>	2	
<i>Actinomyces</i> spp	2	
<i>Alcaligenes</i> spp	2	
<i>Bacillus anthracis</i>	3	Vaccine available
<i>Bacillus cereus</i>	2	
<i>Bacteroides fragilis</i>	2	
<i>Bacteroides</i> spp	2	
<i>Bartonella bacilliformis</i>	2	
<i>Bartonella quintana</i>	2	
<i>Bartonella</i> spp	2	
<i>Bordetella bronchiseptica</i>	2	
<i>Bordetella parapertussis</i>	2	
<i>Bordetella pertussis</i>	2	Vaccine available
<i>Bordetella</i> spp	2	
<i>Borrelia burgdorferi</i>	2	
<i>Borrelia duttonii</i>	2	
<i>Borrelia recurrentis</i>	2	
<i>Borrelia</i> spp	2	
<i>Brachyspira</i> spp (formerly <i>Serpulina</i> spp)	2	
<i>Brucella abortus</i>	3	
<i>Brucella canis</i>	3	
<i>Brucella melitensis</i>	3	
<i>Brucella suis</i>	3	
<i>Burkholderia cepacia</i>	2	
<i>Burkholderia mallei</i> (formerly <i>Pseudomonas mallei</i>)	3	
<i>Burkholderia pseudomallei</i> (formerly <i>Pseudomonas pseudomallei</i>)	3	
<i>Campylobacter fetus</i>	2	
<i>Campylobacter jejuni</i>	2	
<i>Campylobacter</i> spp	2	

Biological agent	Human pathogen Hazard Group	Notes
<i>Cardiobacterium hominis</i>	2	
<i>Chlamydia trachomatis</i>	2	
<i>Chlamydophila pneumoniae</i>	2	
<i>Chlamydophila psittaci</i> (avian strains)	3	
<i>Chlamydophila psittaci</i> (non avian strains)	2	
<i>Clostridium botulinum</i>	2	Toxigenic, Vaccine available
<i>Clostridium perfringens</i>	2	Toxigenic, Vaccine available
<i>Clostridium tetani</i>	2	Toxigenic, Vaccine available
<i>Clostridium</i> spp	2	
<i>Corynebacterium diphtheriae</i>	2	Toxigenic, Vaccine available
<i>Corynebacterium haemolyticum</i>		
<i>Corynebacterium pseudotuberculosis</i>	2	
<i>Corynebacterium pyogenes</i>		
<i>Corynebacterium ulcerans</i>	2	
<i>Corynebacterium</i> spp	2	
<i>Coxiella burnetii</i>	3	
<i>Edwardsiella tarda</i>	2	
<i>Ehrlichia sennetsu</i> (<i>Rickettsia sennetsu</i>)	3	
<i>Ehrlichia</i> spp	2	
<i>Eikenella corrodens</i>	2	
<i>Enterobacter aerogenes/cloacae</i>	2	
<i>Elizabethkingia meningoseptica</i> (formerly <i>Flavobacterium meningosepticum</i>)	2	
<i>Enterobacter</i> spp	2	
<i>Enterococcus</i> spp	2	
<i>Erysipelothrix rhusiopathiae</i>	2	
<i>Escherichia coli</i> (with the exception of non-pathogenic strains)	2	
<i>Escherichia coli</i> , verocytotoxigenic strains (eg O157:H7 or O103)	3	Toxigenic Derogation possible see Annex 1
<i>Flavobacterium meningosepticum</i> – see <i>Elizabethkingia meningoseptica</i>	2	
<i>Fluoribacter bozemanai</i> (see <i>Legionella</i>)	2	
<i>Francisella tularensis</i> (Type A)	3	Vaccine available
<i>Francisella tularensis</i> (Type B)	2	
<i>Fusobacterium necrophorum</i>	2	
<i>Fusobacterium</i> spp	2	
<i>Gardnerella vaginalis</i>	2	
<i>Haemophilus ducreyi</i>	2	
<i>Haemophilus influenzae</i>	2	
<i>Haemophilus</i> spp	2	
<i>Helicobacter pylori</i>	2	
<i>Klebsiella oxytoca</i>	2	
<i>Klebsiella pneumoniae</i>	2	

Biological agent	Human pathogen Hazard Group	Notes
<i>Klebsiella</i> spp	2	
<i>Legionella pneumophila</i>	2	
<i>Legionella</i> spp	2	
<i>Leptospira interrogans</i> (all serovars)	2	
<i>Listeria ivanovii</i>	2	
<i>Listeria monocytogenes</i>	2	
<i>Moraxella catarrhalis</i>	2	
<i>Morganella morganii</i>	2	
<i>Mycobacterium africanum</i>	3	Vaccine available
<i>Mycobacterium avium/intracellulare</i>	2	
<i>Mycobacterium bovis</i>	3	Vaccine available
<i>Mycobacterium bovis</i> (BCG strain)	2	
<i>Mycobacterium chelonae</i>	2	
<i>Mycobacterium fortuitum</i>	2	
<i>Mycobacterium kansasii</i>	2	
<i>Mycobacterium leprae</i>	3	Vaccine available
<i>Mycobacterium malmoense</i>	3	
<i>Mycobacterium marinum</i>	2	
<i>Mycobacterium microti</i>	3	Derogation possible see Annex 1
<i>Mycobacterium paratuberculosis</i>	2	
<i>Mycobacterium scrofulaceum</i>	2	
<i>Mycobacterium simiae</i>	2	
<i>Mycobacterium szulgai</i>	3	
<i>Mycobacterium tuberculosis</i>	3	Vaccine available
<i>Mycobacterium ulcerans</i>	3	Derogation possible see Annex 1
<i>Mycobacterium xenopi</i>	2	
<i>Mycoplasma caviae</i>	2	
<i>Mycoplasma hominis</i>	2	
<i>Mycoplasma pneumoniae</i>	2	
<i>Neisseria gonorrhoeae</i>	2	
<i>Neisseria meningitidis</i>	2	Vaccine available for some serogroups
<i>Nocardia asteroides</i>	2	
<i>Nocardia brasiliensis</i>	2	
<i>Nocardia farcinica</i>	2	
<i>Nocardia nova</i>	2	
<i>Nocardia otitidiscaviarum</i>	2	
<i>Pasteurella multocida</i>	2	
<i>Pasteurella</i> spp	2	
<i>Peptostreptococcus anaerobius</i>	2	
<i>Peptostreptococcus</i> spp	2	
<i>Plesiomonas shigelloides</i>	2	
<i>Porphyromonas</i> spp	2	

Biological agent	Human pathogen Hazard Group	Notes
<i>Prevotella</i> spp	2	
<i>Proteus mirabilis</i>	2	
<i>Proteus penneri</i>	2	
<i>Proteus vulgaris</i>	2	
<i>Providencia alcalifaciens</i>	2	
<i>Providencia rettgeri</i>	2	
<i>Providencia</i> spp	2	
<i>Pseudallescheria boydii</i> – see <i>Scedosporium apiospermum</i>		
<i>Pseudomonas aeruginosa</i>	2	
<i>Rhodococcus equi</i>	2	
<i>Rickettsia akari</i>	3	Derogation possible see Annex 1
<i>Rickettsia canada</i>	3	Derogation possible see Annex 1
<i>Rickettsia conorii</i>	3	
<i>Rickettsia montana</i>	3	Derogation possible see Annex 1
<i>Rickettsia mooseri</i> – see <i>Rickettsia typhi</i>		
<i>Rickettsia prowazekii</i>	3	
<i>Rickettsia rickettsii</i>	3	
<i>Rickettsia sennetsu</i> - see <i>Ehrlichia sennetsu</i>	3	
<i>Rickettsia tsutsugamushi</i>	3	
<i>Rickettsia typhi</i> (<i>Rickettsia mooseri</i>)	3	
<i>Rickettsia</i> spp	3	
<i>Salmonella arizonae</i>	2	
<i>Salmonella enterica</i> serovar <i>enteritidis</i>	2	
<i>Salmonella enterica</i> serovar <i>typhimurium</i> 2	2	
<i>Salmonella paratyphi</i> A	3	Derogation possible see Annex 1
<i>Salmonella paratyphi</i> B/java	3	Derogation possible see Annex 1
<i>Salmonella paratyphi</i> C/ Choleraesuis	3	Derogation possible see Annex 1
<i>Salmonella typhi</i>	3	Vaccine available Derogation possible see Annex 1
<i>Salmonella</i> spp	2	
<i>Serpulina</i> spp – see <i>Brachyspira</i> spp		
<i>Shigella boydii</i>	2	
<i>Shigella dysenteriae</i> (other than Type 1)	2	
<i>Shigella dysenteriae</i> (Type 1)	3	Toxigenic Derogation possible see Annex 1
<i>Shigella flexneri</i>	2	
<i>Shigella sonnei</i>	2	

Biological agent	Human pathogen Hazard Group	Notes
<i>Staphylococcus aureus</i>	2	Toxigenic
<i>Streptobacillus moniliformis</i>	2	
<i>Streptococcus agalactiae</i>	2	
<i>Streptococcus dysgalactiae equisimilis</i>	2	
<i>Streptococcus pneumoniae</i>	2	
<i>Streptococcus pyogenes</i>	2	
<i>Streptococcus suis</i>	2	
<i>Streptococcus</i> spp	2	
<i>Treponema carateum</i>	2	
<i>Treponema pallidum</i>	2	
<i>Treponema pertenue</i>	2	
<i>Treponema</i> spp	2	
<i>Ureaplasma parvum</i>	2	
<i>Ureaplasma urealyticum</i>	2	
<i>Vibrio cholerae</i> (including El Tor)	2	Toxigenic, Vaccine available
<i>Vibrio parahaemolyticus</i>	2	
<i>Vibrio</i> spp	2	
<i>Yersinia enterocolitica</i>	2	
<i>Yersinia pestis</i>	3	Vaccine available
<i>Yersinia pseudotuberculosis</i>	2	
<i>Yersinia</i> spp	2	

FUNGI

Biological agent	Human pathogen Hazard Group	Notes
<i>Absidia corymbifera</i> - see Lichtheimia corymbifera		
<i>Ajellomyces dermatitidis</i> - see <i>Blastomyces dermatitidis</i>		
<i>Aspergillus fumigatus</i>	2	Allergen
<i>Aspergillus</i> spp.	2	
<i>Blastomyces dermatitidis</i> (<i>Ajellomyces dermatitidis</i>)	3	
<i>Candida albicans</i>	2	
<i>Candida</i> spp.	2	
<i>Cladophialophora bantiana</i> (formerly <i>Xylohypha bantiana</i> , <i>Cladosporium bantianum</i>)	3	
<i>Cladophialophora devresii</i>	3	
<i>Cladosporium bantianum</i> (formerly <i>Xylohypha bantiana</i>)- see <i>Cladophialophora bantiana</i>		
<i>Coccidioides immitis</i>	3	
<i>Coccidioides posadasii</i>	3	

Biological agent	Human pathogen Hazard Group	Notes
<i>Cryptococcus neoformans</i> var. <i>gattii</i> (<i>Filobasidiella bacillispora</i>)	2	
<i>Cryptococcus neoformans</i> var. <i>neoformans</i>	2	
<i>Emmonsia cresens</i>	2	
<i>Emmonsia parva</i>	2	
<i>Epidermophyton floccosum</i>	2	
<i>Exophiala</i> spp.	2	
<i>Filobasidiella bacillispora</i> – see <i>Cryptococcus neoformans</i> var. <i>gattii</i>		
<i>Filobasidiella neoformans</i> var. <i>neoformans</i> – sexual state of <i>Cryptococcus neoformans</i> var. <i>neoformans</i>	3	
<i>Fonsecaea compacta</i>	2	
<i>Fonsecaea pedrosoi</i>	2	
<i>Fusarium</i> spp.	2	
<i>Geotrichum</i> spp.	2	
<i>Histoplasma capsulatum</i> var. <i>capsulatum</i> (<i>Ajellomyces capsulatus</i>)	3	
<i>Histoplasma capsulatum</i> var. <i>duboisii</i>	3	
<i>Histoplasma capsulatum</i> var. <i>farcinimosum</i>	3	
<i>Lichtheimia corymbifera</i>	2	
<i>Madurella grisea</i>	2	
<i>Madurella mycetomatis</i>	2	
<i>Malassezia</i> spp.	2	
<i>Microsporum</i> spp	2	
<i>Neotestudina rosatii</i>	2	
<i>Paracoccidioides brasiliensis</i>	3	
<i>Penicillium marneffeii</i>	3	Allergen
<i>Rhinochrysiella mackenziei</i> (formerly <i>Ramichloridium</i>)	3	
<i>Rhizomucor pusillus</i>	2	
<i>Rhizopus microspores</i>	2	
<i>Saksenaea vasiformis</i>	2	
<i>Scedosporium apiospermum</i> (<i>Pseudallescheria boydii</i>)	2	
<i>Scedosporium proliferans</i> (<i>inflatum</i>)	2	
<i>Scopulariopsis brevicaulis</i>	2	
<i>Sporothrix schenckii</i>	2	
<i>Trichophyton rubrum</i>	2	
<i>Trichophyton</i> spp.	2	
<i>Trichosporon</i> spp.	2	
<i>Xylohypha bantiana</i> – see <i>Cladophialophora bantiana</i>		

HELMINTHS

Biological agent	Human pathogen Hazard Group	Notes
<i>Ancylostoma duodenale</i>	2	
<i>Angiostrongylus cantonensis</i>	2	
<i>Angiostrongylus costaricensis</i>	2	
<i>Anisakis simplex</i>	2	
<i>Ascaris lumbricoides</i>	2	Allergen
<i>Ascaris suum</i>	2	Allergen
<i>Brugia malayi</i>	2	
<i>Brugia pahangi</i>	2	
<i>Brugia timori</i>	2	
<i>Capillaria philippinensis</i>	2	
<i>Capillaria</i> spp	2	
<i>Clonorchis</i> - see <i>Opisthorchis</i>	2	
<i>Contraecum osculatum</i>	2	
<i>Dicrocoelium dendriticum</i>	2	
<i>Dipetalonema</i> - see <i>Mansonella</i>	2	
<i>Diphyllobothrium latum</i>	2	
<i>Dracunculus medinensis</i>	2	
<i>Echinococcus granulosus</i>	3	Derogation possible see Annex 1
<i>Echinococcus multilocularis</i>	3	Derogation possible see Annex 1
<i>Echinococcus vogeli</i>	3	Derogation possible see Annex 1
<i>Enterobius vermicularis</i>	2	
<i>Fasciola gigantica</i>	2	
<i>Fasciola hepatica</i>	2	
<i>Fasciolopsis buski</i>	2	
<i>Heterophyes</i> spp	2	
<i>Hymenolepis diminuta</i>	2	
<i>Hymenolepis nana</i>	2	
Loa loa	2	
<i>Mansonella ozzardi</i>	2	
<i>Mansonella perstans</i>	2	
<i>Mansonella streptocerca</i>	2	
<i>Metagonimus</i> spp	2	
<i>Onchocerca volvulus</i>	2	
<i>Opisthorchis felinus</i>	2	
<i>Opisthorchis sinensis</i> (<i>Clonorchis sinensis</i>)	2	
<i>Opisthorchis</i> spp	2	
<i>Opisthorchis viverrini</i> (<i>Clonorchis viverrini</i>)	2	
<i>Necator americanus</i>	2	
<i>Paragonimus westermani</i>	2	
<i>Paragonimus</i> spp	2	

Biological agent	Human pathogen Hazard Group	Notes
<i>Pseudoterranova decipiens</i>	2	
<i>Schistosoma haematobium</i>	2	
<i>Schistosoma intercalatum</i>	2	
<i>Schistosoma japonicum</i>	2	
<i>Schistosoma mansoni</i>	2	
<i>Schistosoma mekongi</i>	2	
<i>Schistosoma</i> spp	2	
<i>Strongyloides</i> spp	2	
<i>Strongyloides stercoralis</i>	2	
<i>Taenia saginata</i>	2	
<i>Taenia solium</i>	3	Derogation possible see Annex 1
<i>Toxocara canis</i>	2	
<i>Toxocara cati</i>	2	
<i>Trichinella nativa</i>	2	
<i>Trichinella nelsoni</i>	2	
<i>Trichinella pseudospiralis</i>	2	
<i>Trichinella spiralis</i>	2	
<i>Trichostrongylus orientalis</i>	2	
<i>Trichostrongylus</i> spp	2	
<i>Trichuris trichiura</i>	2	
<i>Wuchereria bancrofti</i>	2	

PROTOZOA

Biological agent	Human pathogen Hazard Group	Notes
<i>Acanthamoeba castellanii</i>	2	
<i>Acanthamoeba</i> spp	2	
<i>Babesia divergens</i>	2	
<i>Babesia microti</i>	2	
<i>Babesia</i> spp.	2	
<i>Balantidium coli</i>	2	
<i>Blastocystis hominis</i>	2	
<i>Cryptosporidium hominis</i>	2	
<i>Cryptosporidium parvum</i>	2	
<i>Cryptosporidium</i> spp	2	
<i>Cyclospora cayetanensis</i>	2	
<i>Cyclospora</i> spp	2	
<i>Dientamoeba fragilis</i>	2	

Biological agent	Human pathogen Hazard Group	Notes
<i>Encephalitozoon cuniculi</i>	2	
<i>Encephalitozoon hellem</i>	2	
<i>Encephalitozoon intestinalis</i>	2	
<i>Entamoeba histolytica</i>	2	
<i>Enterocytozoon bieneusi</i>	2	
<i>Giardia lamblia</i> (<i>Giardia intestinalis</i>)	2	
<i>Isopora belli</i>	2	
<i>Leishmania aethiopica</i>	2	
<i>Leishmania brasiliensis</i>	3	Derogation possible see Annex 1
<i>Leishmania donovani</i>	3	Derogation possible see Annex 1
<i>Leishmania major</i>	2	
<i>Leishmania mexicana</i>	2	
<i>Leishmania peruviana</i>	2	
<i>Leishmania</i> spp	2	
<i>Leishmania tropica</i>	2	
<i>Naegleria fowleri</i>	3	
<i>Plasmodium falciparum</i>	3	Derogation possible see Annex 1
<i>Plasmodium</i> spp (human & simian)	2	
<i>Sarcocystis suihominis</i>	2	
<i>Toxoplasma gondii</i>	2	
<i>Trichomonas vaginalis</i>	2	
<i>Trypanosoma brucei brucei</i>	2	
<i>Trypanosoma brucei gambiense</i>	2	
<i>Trypanosoma brucei rhodesiense</i>	3	Derogation possible see Annex 1
<i>Trypanosoma cruzi</i>	3	

PRIONS - UNCONVENTIONAL AGENTS ASSOCIATED WITH TRANSMISSIBLE SPONGIFORM ENCEPHALOPATHIES

Biological agent	Human pathogen Hazard Group	Notes
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Human TSEs

Sporadic forms of human TSE:

Sporadic Creutzfeldt-Jakob disease agent	3	Derogation possible see Annex 1
Sporadic fatal insomnia agent	3	Derogation possible see Annex 1
Variably protease resistant prionopathy agent	3	Derogation possible see Annex 1

Genetic forms of human TSE:

Biological agent	Human pathogen Hazard Group	Notes
Familial Creutzfeldt-Jakob disease agent	3	Derogation possible see Annex 1
Gerstmann - Straussler- Scheinker syndrome agent	3	Derogation possible see Annex 1
Fatal familial insomnia agent	3	Derogation possible see Annex 1
Acquired forms of human TSE:		
Variant Creutzfeldt-Jakob disease agent	3	Derogation possible see Annex 1
Iatrogenic Creutzfeldt-Jakob disease agent	3	Derogation possible see Annex 1
Kuru agent	3	Derogation possible see Annex 1
Animal TSEs		
Bovine spongiform encephalopathy (BSE) agent	3	Derogation possible see Annex 1
All strains related to or derived from BSE (including feline spongiform encephalopathy agent and spongiform encephalopathy agent in exotic ungulates)	3	Derogation possible see Annex 1
H-type BSE agent	3	Derogation possible see Annex 1
L-type BSE agent	3	Derogation possible see Annex 1
Scrapie and scrapie related agents	2	
Atypical scrapie agent	2	
Chronic Wasting Disease agent	3	Derogation possible see Annex 1
Laboratory strains of TSEs		
Any strain propagated in primates, mice expressing human PrP gene or mice encoding human familial mutations in PrP	3	Derogation possible see Annex 1
Human strains propagated in any species	3	Derogation possible see Annex 1

VIRUSES

Biological agent	Human pathogen Hazard Group	Notes
Adenoviridae	2	
Anelloviridae		

Biological agent	Human pathogen Hazard Group	Notes
Torque Teno virus (Transfusion transmitted virus)	2	
<i>Arenaviridae</i>		
Old world arenaviruses:		
Ippy virus	2	
Lassa fever virus	4	
Lujo virus	4	
Lymphocytic (strains)	3	
Lymphocytic choriomeningitis virus (other strains)	3	Derrogation for LCM-Armstrong available
Mobala virus	3	
Mopeia virus	3	
Other LCM-Lassa complex viruses	2	
New world arenaviruses:		
Amapari virus	2	
Flexal virus	3	
Guanarito virus	4	
Junin virus	4	
Latino virus	2	

Biological agent	Human pathogen Hazard Group	Notes
Machupo virus	4	
Parana virus	2	
Pichinde virus	2	
Sabia virus	4	
Tamiami virus	2	
Whitewater Arroyo virus	2	
Other new world arenaviruses	2	
Arteriviridae		
Astroviridae	2	
Bornaviridae		
Borna disease virus	3	
Bunyaviridae		
Bunyaviruses:		
Akabane virus	3	
Bhanja virus	3	
Bunyamwera virus	2	
California encephalitis virus	2	
Germiston virus	3	
Oropouche virus	3	
Hantaviruses:		
Belgrade (Dobrava) virus	3	
Hantaan virus (Korean haemorrhagic fever)	3	
Puumala virus	2	
Prospect Hill virus	2	

Biological agent	Human pathogen Hazard Group	Notes
Seoul virus	3	
Sin Nombre virus (formerly Muerto Canyon)	3	
Other hantaviruses	2	
Nairoviruses:		
Crimean/Congo haemorrhagic fever virus	4	
Hazara virus	2	
Phleboviruses:		
Rift valley fever virus	3	
Sandfly fever virus	2	
Toscana virus	2	
Other <i>bunyaviridae</i> known to be pathogenic	2	
Caliciviridae		
Norovirus (formerly Norwalk virus)	2	
Sapo virus	2	
Other <i>caliciviridae</i>	2	
Coronaviridae		
29E virus	2	
OC43 virus	2	
SARS virus	3	
Other <i>coronaviridae</i>	2	
Filoviridae		
Ebola Cote d'Ivoire virus	4	
Ebola Reston virus	4	
Ebola Sudan virus	4	
Ebola Zaire virus	4	
Marburg virus	4	

Biological agent	Human pathogen Hazard Group	Notes
<i>Flaviviridae</i>		
Absettarov virus	3	Vaccine available
Central European tick-borne encephalitis virus	3	
Dengue viruses types 1-4	3	
GB virus C (Hepatitis G virus)	3	Derogation possible see Annex 1
Hanzalova virus	3	Vaccine available
Hepatitis C virus	3	Derogation possible see Annex 1
Hypr virus	3	Vaccine available
Israel turkey meningitis virus	3	
Japanese encephalitis virus	3	Vaccine available
Kumlinge virus	3	
Kysanur forest disease virus	4	Vaccine available
Louping ill virus	3	Vaccine available Derogation possible see Annex 1
Murray Valley encephalitis virus	3	
Negishi virus	3	
Omsk haemorrhagic fever virus	4	Vaccine available
Powassan virus	3	
Rocio virus	3	
Russian spring summer encephalitis virus	4	Vaccine available

Biological agent	Human pathogen Hazard Group	Notes
Sal Vieja virus	3	
San Perlita virus	3	
Spondweni virus	3	
St Louis encephalitis virus	3	
Tick-borne encephalitis virus	3	
Wesselsbron virus	3	Derogation possible see Annex 1
West Nile fever virus	3	
Yellow fever virus	3	Vaccine available
Other flaviviruses known to be pathogenic	2	
Hepadnaviridae		
Hepatitis B virus	3	Vaccine available Derogation possible see Annex 1
Hepatitis D virus (delta)	3	Vaccine available Derogation possible see Annex 1
Herpesviridae		
B virus - see Herpesvirus simiae		
Cytomegalovirus	2	
Epstein-Barr virus	2	
Herpesvirus simiae (B virus)	4	
Herpes simplex virus types 1 and 2	2	
Human herpesvirus type 6 - HHV6	2	
Human herpesvirus type 7 - HHV7	2	
Human herpesvirus type 8 - HHV8 (Kaposi's sarcoma-associated herpesvirus)	2	
Varicella-zoster virus	2	
Orthomyxoviridae		
Dhori virus	2	
Influenza virus types A*, B and C	2	Vaccine available
Thogoto virus	2	
Papovaviridae		
Polyomaviruses:		
BK virus	2	
JC virus	2	
KI virus	2	
Simian virus 40 (SV40)	2	
WU virus	2	
Papillomaviruses:		
Human papillomaviruses	2	
Paramyxoviridae		
Hendra virus (formerly equine morbillivirus)	4	

Biological agent	Human pathogen Hazard Group	Notes
Human metapneumovirus	2	
Measles virus	2	Vaccine available
Mumps virus	2	Vaccine available
Newcastle disease virus	2	Both pathogenic and uncharacterised. Derogation possible for animal pathogen work.
Nipah virus	4	
Parainfluenza virus (Types 1 to 4)	2	
Respiratory syncytial virus (human)	2	
Parvoviridae		
Bocavirus genus	2	
Parvovirus B19	2	
Human parvovirus (Parv4/Parv5)	2	
Picornaviridae		
Acute haemorrhagic conjunctivitis virus (AHC)	2	
Coxsackieviruses	2	
Echoviruses	2	
Hepatitis A virus (human enterovirus type 72)	2	Vaccine available
Parechoviruses		
Polioviruses	2	Vaccine available
Rhinoviruses	2	
Poxviridae		
Capripoxvirus:		
Molluscipox:		
Molluscum contagiosum virus	2	
Orthopox:		
Buffalopox virus	2	
Cowpox virus	2	
Elephantpox virus	2	
Monkeypox virus	3	Vaccine available
Rabbitpox virus	2	
Vaccinia virus	2	
Variola virus (major and minor)	4	Vaccine available
Whitepox virus	4	
Parapox:		
Orf virus	2	
Pseudocowpox virus (Milker's nodes virus)	2	
Yatapox:		
Tana virus	2	
Yaba virus	2	
Reoviridae		
Coltivirus	2	
Human rotaviruses	2	

Biological agent	Human pathogen Hazard Group	Notes
Orbiviruses	2	
Reoviruses	2	
<i>Retroviridae</i>		
Human immunodeficiency viruses	3	Derogation possible see Annex 1
Human T-cell lymphotropic viruses (HTLV) types 1 and 2	3	Derogation possible see Annex 1
Simian immunodeficiency virus	3	Derogation possible see Annex 1
Xenotropic murine leukemia virus-related virus	3	
<i>Rhabdoviridae</i>		
Australian bat lyssavirus	3	Vaccine available Derogation possible see Annex 1
Duvenhage virus	3	Vaccine available Derogation possible for animal pathogen work.
European bat lyssaviruses 1 and 2	3	Vaccine available Derogation possible see Annex 1
Lagos bat virus	3	Vaccine available Derogation possible see Annex 1
Mokola virus	3	Vaccine available Derogation possible see Annex 1
Piry virus	3	
Rabies virus	3	Vaccine available Derogation possible see Annex 1
Vesicular stomatitis virus	2	Derogation possible for use as vector.
<i>Togaviridae</i>		
Alphaviruses:		
Bebaru virus	2	
Chikungunya virus	3	Derogation possible see Annex 1
Eastern equine encephalitis virus	3	
Everglades virus	3	Derogation possible see Annex 1
Getah virus	3	
Mayaro virus	3	
Middleburg virus	3	
Mucambo virus	3	Derogation possible see Annex 1
Ndumu virus	3	
O'nyong-nyong virus	2	
Ross river virus	2	

Biological agent	Human pathogen Hazard Group	Notes
Sagiyama virus	3	
Semliki forest virus	2	
Sindbis virus	2	Includes related viruses Karelian Fever, Ockelbo and Pogosta
Tonate virus	3	Derogation possible see Annex 1
Venezuelan equine encephalitis virus	3	
Western equine encephalitis virus	3	Vaccine available
Other known alphaviruses	2	
Rubivirus:		
Rubella virus	2	Vaccine available
<i>Toroviridae</i>		
Berne virus	2	
Breda virus	2	
Porcine torovirus	2	
<i>No assigned family</i>		
Hepevirus:		
Hepatitis E virus	3	Derogation possible see Annex 1