



# **Final Candidate Contaminant List 3**

## **Microbes: Identifying the Universe**

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## **Final CCL 3**

EPA is including twelve pathogens on the final Candidate Contaminant List 3 (CCL 3), one more than the eleven pathogens on the Draft CCL 3. The Agency is adding Adenovirus, Enterovirus, and *Mycobacterium avium*, and is removing *Vibrio cholerae* and *Entamoeba histolytica* from the Final CCL 3 (See Exhibit 1).

The protocol EPA used to select the microbial contaminants for the Draft CCL 3 is described in detail in the February 21, 2008, notice (73 FR 9631, 9644; USEPA, 2008a). Except for a minor change in the scoring step of the microbial CCL 3 process, (see the Final CCL 3 Microbes: PCCL to CCL Process) the protocol for selecting pathogens for the final CCL 3 remains the same as the protocol for the draft CCL 3. Specifically, this step of the process for identifying the universe is unchanged from the Draft CCL 3.

### **CCL 3 Microbes: Identifying the Universe**

The Universe process began with the list of 1,415 human pathogens compiled by Taylor et al. (2001). This list of bacteria, viruses, protozoa, helminths, and fungi was adopted upon the recommendation of the National Drinking Water Advisory Committee (NDWAC) as the starting point for the CCL 3 microbial universe. The Agency added organisms to the Taylor et al. (2001) list and updated some nomenclature. EPA acknowledges that given the dynamic nature of ongoing microbial research, any list of all human pathogens must be periodically updated to remain accurate.

#### **1.0 Background and Scope**

The Safe Drinking Water Act (SDWA), as amended in 1996, requires EPA to publish a list of contaminants that are known or anticipated to occur in public water systems and which may require regulation under the SDWA. This list is called the Contaminant Candidate List (CCL). The first CCL (CCL 1) was published in March 1998 (USEPA, 1998) and the second CCL (CCL 2) was published February 24, 2005 (USEPA, 2005).

EPA requested assistance from the National Academy of Sciences National Research Council's Water Science and Technology Board (NRC) for developing a more robust approach for identifying and prioritizing potential drinking water contaminants. The NRC formed the Committee on Drinking Water Contaminants, and the committee published their recommendations in 1999 and 2001 (NRC, 1999a; NRC, 1999b; NRC, 2001).

In September 2002, at EPA's request, NDWAC formed the CCL Classification Process workgroup to evaluate the NRC recommendations and provide advice to EPA regarding implementation of the recommendations. The NDWAC workgroup completed its deliberations and issued a report in May, 2004.

## 2.0 Additions to the List Compiled by Taylor et al., 2001

EPA followed NDWAC's recommendation to specifically use Taylor, et al. (2001) and literature reviews as the starting point for the Microbial CCL 3 Universe (NDWAC, 2004). As EPA reviewed Taylor et al. (2001), additional microbial contaminants were also identified. EPA looked at fungi in drinking water literature and identified 6 fungi reported to occur in drinking water distribution systems that did not appear on the Taylor list (Exhibit 1). EPA also added reovirus to the universe based on additional health effects information (Tyler, et al., 2004).

In October 2006, EPA published a notice in the *Federal Register* (USEPA, 2006) requesting chemical and microbial contaminant nominations as part of the process to identify emerging contaminants that should be considered for the CCL. Through this process, 24 microbial contaminants were nominated by the public (USEPA, 2007). Twenty-two of the microbes were already included on the CCL 3 Universe. The two additional microbes nominated were *Methylobacterium* (with two species) and mimivirus. These bacterial species, two viral groups and six fungal species were added to the microbial universe which brings the universe list to 1,425 microbes (noted with an \*). The full CCL 3 microbial universe list is presented in Exhibit 2.

### Exhibit 1. Fungi Added to the Microbial Universe

Organism	Reference
<i>Arthrographis kelrae</i>	Patterson, 2005
<i>Chrysosporium zontatum</i> .	Arvanitidou et al., 1999
<i>Geotrichum candidum</i>	Rosenzweig et al., 1986
<i>Sporotrichum pruinosum</i>	Doggett, 2000
<i>Stachybotrys chartarum</i>	Dogget, 2000
<i>Stemphylium macrosporoideum</i>	West, 1986

### 3.0 References

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- United States Environmental Protection Agency (USEPA). 2005. Drinking water contaminant candidate list 2; Final Notice. *Federal Register* 70(36):9071-9077.
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- United States Environmental Protection Agency (USEPA). 2008. *Summary of Nominations for the Third Contaminant Candidate List*.

West, P. R. 1986. Isolation rates and characterization of fungi in drinking water distribution systems. Proceedings of the Water Quality Technology Conference, American Water Works Association, Denver, CO.

## **Appendix A: The CCL 3 Microbial Universe List**

## The CCL 3 Microbial Universe List

The list of 1,415 microorganisms compiled by Taylor et al. (2001) includes bacteria and rickettsia, viruses and prions, protozoa, helminths, and fungi. The the microbial nomenclature of the list represents the nomenclature used by the original author and the taxonomic understanding as of the date of publication. Due to the dynamic nature of microbial research, Appendix A is incomplete, and in a few instances inaccurate (e.g., listing a microorganism under different names). No attempt was made to correct errors in the list; and it was adopted verbatim. Additions to the list were made by EPA following solicitation of nominations from the scientific community and as the result of new information on emerging pathogens of potential relevance. The list is presented alphabetically for each of the five microbiological groups in Exhibit 2.

### Exhibit 2. The CCL 3 Microbial Universe

#### Bacteria and Rickettsia

<i>Abiotrophia defectiva</i>
<i>Achromobacter piechaudii</i>
<i>Achromobacter xylosoxidans</i>
<i>Acidaminococcus fermentans</i>
<i>Acinetobacter baumannii</i>
<i>Acinetobacter calcoaceticus</i>
<i>Acinetobacter haemolyticus</i>
<i>Acinetobacter johnsonii</i>
<i>Acinetobacter junii</i>
<i>Acinetobacter lwoffii</i>
<i>Acinetobacter radioresistens</i>
<i>Actinobacillus equuli</i>
<i>Actinobacillus hominis</i>
<i>Actinobacillus lignieresii</i>
<i>Actinobacillus pleuropneumoniae</i>
<i>Actinobacillus suis</i>
<i>Actinobacillus ureae</i>
<i>Actinomyces georgiae</i>
<i>Actinomyces gerencseriae</i>
<i>Actinomyces israelii</i>
<i>Actinomyces meyeri</i>
<i>Actinomyces naeslundii</i>
<i>Actinomyces neuii</i>
<i>Actinomyces odontolyticus</i>
<i>Actinomyces radingae</i>
<i>Actinomyces turicensis</i>
<i>Aerococcus viridans</i>
<i>Aeromonas caviae</i>



<i>Aeromonas hydrophila</i>
<i>Aeromonas sobria</i>
<i>Aeromonas veronii</i>
<i>Alcaligenes odorans</i>
<i>Amycolatopsis orientalis</i>
<i>Arcanobacterium bernardiae</i>
<i>Arcanobacterium heamolyticum</i>
<i>Arcanobacterium pyogenes</i>
<i>Arcobacter butzleri</i>
<i>Arcobacter cryaerophilus</i>
<i>Bacillus anthracis</i>
<i>Bacillus cereus</i>
<i>Bacillus circulans</i>
<i>Bacillus coagulans</i>
<i>Bacillus licheniformis</i>
<i>Bacillus mycoides</i>
<i>Bacillus pumilus</i>
<i>Bacillus sphaericus</i>
<i>Bacillus subtilis</i>
<i>Bacillus thuringiensis</i>
<i>Bacteroides caccae</i>
<i>Bacteroides distasonis</i>
<i>Bacteroides eggerthii</i>
<i>Bacteroides forsythus</i>
<i>Bacteroides fragilis</i>
<i>Bacteroides galacturonicus</i>
<i>Bacteroides merdae</i>
<i>Bacteroides ovatus</i>
<i>Bacteroides pectinophilus</i>
<i>Bacteroides splanchnicus</i>
<i>Bacteroides stercoris</i>
<i>Bacteroides thetaiotaomicron</i>
<i>Bacteroides uniformis</i>
<i>Bacteroides ureolyticus</i>
<i>Bacteroides vulgatus</i>
<i>Bartonella bacilliformis</i>
<i>Bartonella elizabethae</i>
<i>Bartonella henselae</i>
<i>Bartonella quintana</i>
<i>Bergeyella zoohelcum</i>
<i>Bifidobacterium dentium</i>
<i>Bilophila wadsworthia</i>
<i>Bordetella avium</i>

<i>Bordetella bronchiseptica</i>
<i>Bordetella parapertussis</i>
<i>Bordetella pertussis</i>
<i>Borrelia brasiliensis</i>
<i>Borrelia burgdorferi</i>
<i>Borrelia caucasica</i>
<i>Borrelia crocidurae</i>
<i>Borrelia duttonii</i>
<i>Borrelia hermsii</i>
<i>Borrelia hispanica</i>
<i>Borrelia latyschewii</i>
<i>Borrelia mazzottii</i>
<i>Borrelia parkeri</i>
<i>Borrelia persica</i>
<i>Borrelia recurrentis</i>
<i>Borrelia turicatae</i>
<i>Borrelia venezuelensis</i>
<i>Brevibacillus brevis</i>
<i>Brevundimonas diminuta</i>
<i>Brevundimonas vesicularis</i>
<i>Brucella melitensis</i>
<i>Burkholderia cepacia</i>
<i>Burkholderia mallei</i>
<i>Burkholderia pseudomallei</i>
<i>Campylobacter coli</i>
<i>Campylobacter concisus</i>
<i>Campylobacter curvus</i>
<i>Campylobacter fetus</i>
<i>Campylobacter gracilis</i>
<i>Campylobacter hyointestinalis</i>
<i>Campylobacter jejuni</i>
<i>Campylobacter lari</i>
<i>Campylobacter rectus</i>
<i>Campylobacter sputorum</i>
<i>Campylobacter upsaliensis</i>
<i>Capnocytophaga canimorsus</i>
<i>Capnocytophaga cynodegmi</i>
<i>Capnocytophaga gingivalis</i>
<i>Capnocytophaga ochracea</i>
<i>Capnocytophaga sputigena</i>
<i>Cardiobacterium hominis</i>
<i>Cedecea davisae</i>
<i>Cedecea lapagei</i>
<i>Cedecea neteri</i>

<i>Cellulomonas cellulans</i>
<i>Cellulomonas turbata</i>
<i>Centipeda periodontii</i>
<i>Chlamydia trachomatis</i>
<i>Chlamydophila pneumoniae</i>
<i>Chlamydophila psittaci</i>
<i>Chromobacterium violaceum</i>
<i>Chryseobacterium balustinum</i>
<i>Chryseobacterium meningosepticum</i>
<i>Citrobacter amalonaticus</i>
<i>Citrobacter braakii</i>
<i>Citrobacter farmeri</i>
<i>Citrobacter freundii</i>
<i>Citrobacter koseri</i>
<i>Citrobacter rodentium</i>
<i>Citrobacter sedlakii</i>
<i>Citrobacter werkmanii</i>
<i>Citrobacter youngae</i>
<i>Clostridium baratii</i>
<i>Clostridium bifermentans</i>
<i>Clostridium botulinum</i>
<i>Clostridium butyricum</i>
<i>Clostridium chauvoei</i>
<i>Clostridium difficile</i>
<i>Clostridium fallax</i>
<i>Clostridium histolyticum</i>
<i>Clostridium novyi</i>
<i>Clostridium perfringens</i>
<i>Clostridium ramosum</i>
<i>Clostridium septicum</i>
<i>Clostridium sordellii</i>
<i>Clostridium sporogenes</i>
<i>Clostridium tertium</i>
<i>Clostridium tetani</i>
<i>Collinsella aerofaciens</i>
<i>Comamonas testosteroni</i>
<i>Corynebacterium afermentans</i>
<i>Corynebacterium argentoratense</i>
<i>Corynebacterium bovis</i>
<i>Corynebacterium diphtheriae</i>
<i>Corynebacterium jeikeium</i>
<i>Corynebacterium kutscheri</i>
<i>Corynebacterium macginleyi</i>
<i>Corynebacterium minutissimum</i>

<i>Corynebacterium propinquum</i>
<i>Corynebacterium pseudodiphthericum</i>
<i>Corynebacterium pseudotuberculosis</i>
<i>Corynebacterium striatum</i>
<i>Corynebacterium ulcerans</i>
<i>Corynebacterium urealyticum</i>
<i>Corynebacterium xerosis</i>
<i>Coxiella burnetii</i>
<i>Delftia acidovorans</i>
<i>Dermatophilus congolensis</i>
<i>Dichelobacter nodosus</i>
<i>Edwardsiella hoshinae</i>
<i>Edwardsiella tarda</i>
<i>Eggerthella lenta</i>
<i>Ehrlichia chaffeensis</i>
<i>Ehrlichia equi</i>
<i>Ehrlichia ewingii</i>
<i>Ehrlichia phagocytophila</i>
<i>Ehrlichia sennetsu</i>
<i>Eikenella corrodens</i>
<i>Enterobacter aerogenes</i>
<i>Enterobacter amnigenus</i>
<i>Enterobacter asburiae</i>
<i>Enterobacter cancerogenus</i>
<i>Enterobacter cloacae</i>
<i>Enterobacter gergoviae</i>
<i>Enterobacter hormaechei</i>
<i>Enterobacter sakazakii</i>
<i>Enterococcus avium</i>
<i>Enterococcus casseliflavus</i>
<i>Enterococcus durans</i>
<i>Enterococcus faecalis</i>
<i>Enterococcus faecium</i>
<i>Enterococcus flavescens</i>
<i>Enterococcus gallinarum</i>
<i>Enterococcus hirae</i>
<i>Enterococcus mundtii</i>
<i>Enterococcus raffinosus</i>
<i>Erysipelothrix rhusiopathiae</i>
<i>Escherichia coli</i>
<i>Eubacterium brachy</i>
<i>Eubacterium combesii</i>
<i>Eubacterium contortum</i>
<i>Eubacterium cylindroides</i>

<i>Eubacterium limosum</i>
<i>Eubacterium moniliforme</i>
<i>Eubacterium multiforme</i>
<i>Eubacterium nodatum</i>
<i>Eubacterium rectale</i>
<i>Eubacterium saburreum</i>
<i>Eubacterium saphenum</i>
<i>Eubacterium sulci</i>
<i>Eubacterium tenue</i>
<i>Eubacterium timidum</i>
<i>Ewingella americana</i>
<i>Fibrobacter intestinalis</i>
<i>Filifactor alocis</i>
<i>Fingoldia magna</i>
<i>Fluoribacter bozemanae</i>
<i>Fluoribacter dumoffii</i>
<i>Fluoribacter gormanii</i>
<i>Francisella tularensis</i>
<i>Fusobacterium mortiferum</i>
<i>Fusobacterium necrophorum</i>
<i>Fusobacterium nucleatum</i>
<i>Fusobacterium periodonticum</i>
<i>Fusobacterium ulcerans</i>
<i>Fusobacterium varium</i>
<i>Gardnerella vaginalis</i>
<i>Gemella morbillorum</i>
<i>Gordonia amarae</i>
<i>Gordonia bronchialis</i>
<i>Gordonia rubropertincta</i>
<i>Gordonia sputi</i>
<i>Gordonia terrae</i>
<i>Granulicatella adiacens</i>
<i>Haemophilus actinomycetemcomitans</i>
<i>Haemophilus aphrophilus</i>
<i>Haemophilus ducreyi</i>
<i>Haemophilus haemolyticus</i>
<i>Haemophilus influenzae</i>
<i>Haemophilus parahaemolyticus</i>
<i>Haemophilus parainfluenzae</i>
<i>Haemophilus paraphrophilus</i>
<i>Haemophilus segnis</i>
<i>Hafnia alvei</i>
<i>Helicobacter cinaedi</i>

<i>Helicobacter fennelliae</i>
<i>Helicobacter heilmannii</i>
<i>Helicobacter pullorum</i>
<i>Helicobacter pylori</i>
<i>Kingella denitrificans</i>
<i>Kingella kingae</i>
<i>Klebsiella granulomatis</i>
<i>Klebsiella ornithinolytica</i>
<i>Klebsiella oxytoca</i>
<i>Klebsiella pneumoniae</i>
<i>Kluyvera ascorbata</i>
<i>Kluyvera cryocrescens</i>
<i>Lactobacillus</i> sp.
<i>Legionella anisa</i>
<i>Legionella birminghamensis</i>
<i>Legionella cherrii</i>
<i>Legionella cincinnatiensis</i>
<i>Legionella feeleei</i>
<i>Legionella hackeliae</i>
<i>Legionella jordanis</i>
<i>Legionella lansingensis</i>
<i>Legionella longbeachae</i>
<i>Legionella oakridgensis</i>
<i>Legionella pneumophila</i>
<i>Legionella rubrilucens</i>
<i>Legionella sainthelensi</i>
<i>Legionella tucsonensis</i>
<i>Legionella wadsworthii</i>
<i>Leifsonia aquatica</i>
<i>Leptospira borgpetersenii</i>
<i>Leptospira inadai</i>
<i>Leptospira interrogans</i>
<i>Leptospira kirschneri</i>
<i>Leptospira meyeri</i>
<i>Leptospira noguchii</i>
<i>Leptospira santarosai</i>
<i>Leptospira weilii</i>
<i>Leptotrichia buccalis</i>
<i>Listeria ivanovii</i>
<i>Listeria monocytogenes</i>
<i>Listeria seeligeri</i>
<i>Listeria welshimeri</i>
<i>Mannheimia haemolytica</i>
<i>Megamonas hypermegale</i>

<i>Megasphaera</i> sp.
<i>Methylobacterium mesophilicum</i> *
<i>Methylobacterium zatmanii</i> *
<i>Micromonas micros</i>
<i>Moraxella atlantae</i>
<i>Moraxella bovis</i>
<i>Moraxella catarrhalis</i>
<i>Moraxella caviae</i>
<i>Moraxella cuniculi</i>
<i>Moraxella lacunata</i>
<i>Moraxella lincolnii</i>
<i>Moraxella liquefaciens</i>
<i>Moraxella nonliquefaciens</i>
<i>Moraxella osloensis</i>
<i>Moraxella ovis</i>
<i>Morganella morganii</i>
<i>Mycobacterium abscessus</i>
<i>Mycobacterium africanum</i>
<i>Mycobacterium asiaticum</i>
<i>Mycobacterium avium</i>
<i>Mycobacterium bovis</i>
<i>Mycobacterium celatum</i>
<i>Mycobacterium chelonae</i>
<i>Mycobacterium conspicuum</i>
<i>Mycobacterium fortuitum</i>
<i>Mycobacterium genavense</i>
<i>Mycobacterium gordonae</i>
<i>Mycobacterium haemophilum</i>
<i>Mycobacterium kansasii</i>
<i>Mycobacterium leprae</i>
<i>Mycobacterium malmoense</i>
<i>Mycobacterium marinum</i>
<i>Mycobacterium mucogenicum</i>
<i>Mycobacterium peregrinum</i>
<i>Mycobacterium porcinum</i>
<i>Mycobacterium scrofulaceum</i>
<i>Mycobacterium senegalense</i>
<i>Mycobacterium shimoidei</i>
<i>Mycobacterium simiae</i>
<i>Mycobacterium smegmatis</i>
<i>Mycobacterium szulgai</i>
<i>Mycobacterium tuberculosis</i>
<i>Mycobacterium ulcerans</i>
<i>Mycobacterium xenopi</i>

<i>Mycoplasma fermentans</i>
<i>Mycoplasma genitalium</i>
<i>Mycoplasma hominis</i>
<i>Mycoplasma pneumoniae</i>
<i>Mycoplasma salivarium</i>
<i>Myroides odoratus</i>
<i>Neisseria cinerea</i>
<i>Neisseria elongata</i>
<i>Neisseria flava</i>
<i>Neisseria flavescens</i>
<i>Neisseria gonorrhoeae</i>
<i>Neisseria lactamica</i>
<i>Neisseria meningitidis</i>
<i>Neisseria mucosa</i>
<i>Neisseria perflava</i>
<i>Neisseria sicca</i>
<i>Neisseria subflava</i>
<i>Neisseria weaveri</i>
<i>Nocardia asteroides</i>
<i>Nocardia brasiliensis</i>
<i>Nocardia caviae</i>
<i>Nocardia farcinica</i>
<i>Nocardia nova</i>
<i>Nocardia otitidiscaviarum</i>
<i>Nocardia pseudobrasiliensis</i>
<i>Nocardia transvalensis</i>
<i>Ochrobactrum anthropi</i>
<i>Oligella ureolytica</i>
<i>Oligella urethralis</i>
<i>Orientia tsutsugamushi</i>
<i>Paenibacillus alvei</i>
<i>Paenibacillus macerans</i>
<i>Pantoea agglomerans</i>
<i>Pasteurella aerogenes</i>
<i>Pasteurella caballi</i>
<i>Pasteurella canis</i>
<i>Pasteurella dagmatis</i>
<i>Pasteurella multocida</i>
<i>Pasteurella pneumotropica</i>
<i>Pasteurella stomatis</i>
<i>Peptococcus niger</i>
<i>Peptostreptococcus anaerobius</i>
<i>Peptostreptococcus asaccharolyticus</i>



<i>Peptostreptococcus lactolyticus</i>
<i>Peptostreptococcus prevotii</i>
<i>Peptostreptococcus vaginalis</i>
<i>Photobacterium damsela</i>
<i>Plesiomonas shigelloides</i>
<i>Porphyromonas asaccharolytica</i>
<i>Porphyromonas catoniae</i>
<i>Porphyromonas circumdentaria</i>
<i>Porphyromonas endodontalis</i>
<i>Porphyromonas gingivalis</i>
<i>Porphyromonas levii</i>
<i>Porphyromonas macacae</i>
<i>Prevotella bivia</i>
<i>Prevotella buccae</i>
<i>Prevotella buccalis</i>
<i>Prevotella corporis</i>
<i>Prevotella dentalis</i>
<i>Prevotella denticola</i>
<i>Prevotella disiens</i>
<i>Prevotella enoeca</i>
<i>Prevotella heparinolytica</i>
<i>Prevotella intermedia</i>
<i>Prevotella loescheii</i>
<i>Prevotella melaninogenica</i>
<i>Prevotella nigrescens</i>
<i>Prevotella oralis</i>
<i>Prevotella oris</i>
<i>Prevotella oulora</i>
<i>Prevotella ruminicola</i>
<i>Prevotella tannerae</i>
<i>Prevotella veroralis</i>
<i>Prevotella zoogloformans</i>
<i>Propionibacterium acnes</i>
<i>Propionibacterium avidum</i>
<i>Propionibacterium granulosum</i>
<i>Propionibacterium propionicus</i>
<i>Proteus mirabilis</i>
<i>Proteus penneri</i>
<i>Proteus vulgaris</i>
<i>Providencia alcalifaciens</i>
<i>Providencia rettgeri</i>
<i>Providencia stuartii</i>
<i>Pseudomonas aeruginosa</i>
<i>Pseudomonas alcaligenes</i>

<i>Pseudomonas fluorescens</i>
<i>Pseudomonas pseudoalcaligenes</i>
<i>Pseudomonas putida</i>
<i>Pseudomonas stutzeri</i>
<i>Pseudonocardia autotrophica</i>
<i>Pseudoramibacter alactolyticus</i>
<i>Psychrobacter phenylpyruvicus</i>
<i>Rahnella aquatilis</i>
<i>Ralstonia pickettii</i>
<i>Rhodococcus equi</i>
<i>Rhodococcus erythropolis</i>
<i>Rhodococcus fascians</i>
<i>Rhodococcus rhodnii</i>
<i>Rhodococcus rhodochrous</i>
<i>Rickettsia africae</i>
<i>Rickettsia akari</i>
<i>Rickettsia australis</i>
<i>Rickettsia conorii</i>
<i>Rickettsia felis</i>
<i>Rickettsia honei</i>
<i>Rickettsia japonica</i>
<i>Rickettsia massiliae</i>
<i>Rickettsia prowazekii</i>
<i>Rickettsia rickettsii</i>
<i>Rickettsia sibirica</i>
<i>Rickettsia typhi</i>
<i>Rothia dentocariosa</i>
<i>Ruminococcus productus</i>
<i>Saccharomonospora viridis</i>
<i>Saccharopolyspora rectivirgula</i>
<i>Salmonella bongori</i>
<i>Salmonella choleraesuis</i>
<i>Salmonella enteritidis</i>
<i>Salmonella typhi</i>
<i>Salmonella typhimurium</i>
<i>Sealdella termitidis</i>
<i>Selenomonas artemidis</i>
<i>Selenomonas diana</i>
<i>Selenomonas flueggei</i>
<i>Selenomonas infelix</i>
<i>Selenomonas noxia</i>
<i>Serratia ficaria</i>
<i>Serratia marcescens</i>
<i>Serratia odorifera</i>

<i>Serratia plymuthica</i>
<i>Serratia proteamaculans</i>
<i>Serratia rubidaea</i>
<i>Shigella boydii</i>
<i>Shigella dysenteriae</i>
<i>Shigella flexneri</i>
<i>Shigella sonnei</i>
<i>Sphingomonas paucimobilis</i>
<i>Spirillum minus</i>
<i>Staphylococcus aureus</i>
<i>Staphylococcus epidermidis</i>
<i>Staphylococcus haemolyticus</i>
<i>Staphylococcus hyicus</i>
<i>Staphylococcus intermedius</i>
<i>Staphylococcus lugdunensis</i>
<i>Staphylococcus saprophyticus</i>
<i>Staphylococcus warneri</i>
<i>Stenotrophomonas maltophilia</i>
<i>Streptobacillus moniliformis</i>
<i>Streptococcus acidominimus</i>
<i>Streptococcus agalactiae</i>
<i>Streptococcus anginosus</i>
<i>Streptococcus bovis</i>
<i>Streptococcus canis</i>
<i>Streptococcus constellatus</i>
<i>Streptococcus criceti</i>
<i>Streptococcus equi</i>
<i>Streptococcus gordonii</i>
<i>Streptococcus intermedius</i>
<i>Streptococcus milleri</i>
<i>Streptococcus mitis</i>
<i>Streptococcus mutans</i>
<i>Streptococcus pneumoniae</i>
<i>Streptococcus pyogenes</i>
<i>Streptococcus salivarius</i>
<i>Streptococcus sanguis</i>
<i>Streptococcus sobrinus</i>
<i>Streptococcus suis</i>
<i>Streptococcus uberis</i>
<i>Sutterella wadsworthensis</i>
<i>Suttonella indologenes</i>
<i>Tatlockia maceachernii</i>
<i>Tatlockia micdadei</i>
<i>Tatumella tyseos</i>

<i>Treponema carateum</i>
<i>Treponema pallidum</i>
<i>Tropheryma whippelii</i>
<i>Tsukamurella inchoensis</i>
<i>Tsukamurella paurometabola</i>
<i>Tsukamurella pulmonis</i>
<i>Tsukamurella tyrosinosolvens</i>
<i>Ureaplasma urealyticum</i>
<i>Veillonella atypica</i>
<i>Veillonella dispar</i>
<i>Veillonella parvula</i>
<i>Vibrio alginolyticus</i>
<i>Vibrio cholerae</i>
<i>Vibrio cincinnatiensis</i>
<i>Vibrio fluvialis</i>
<i>Vibrio furnissii</i>
<i>Vibrio hollisae</i>
<i>Vibrio mimicus</i>
<i>Vibrio parahaemolyticus</i>
<i>Vibrio vulnificus</i>
<i>Wolinella succinogenes</i>
<i>Yersinia bercovieri</i>
<i>Yersinia enterocolitica</i>
<i>Yersinia frederiksenii</i>
<i>Yersinia intermedia</i>
<i>Yersinia kristensenii</i>
<i>Yersinia mollaretii</i>
<i>Yersinia pestis</i>
<i>Yersinia pseudotuberculosis</i>
<i>Yersinia rohdei</i>
<i>Yersinia ruckeri</i>

### Viruses and Prions

Andes virus
Apoi virus
Australian bat lyssavirus
Bagaza virus
Bangui virus
Banna virus
Banji virus
Barmah Forest virus
Batken virus
Bayou virus

Bebaru virus
Bhanja virus
BK virus
Black creek canal virus
Borna disease virus
Bovine Ephemeral Fever virus
Bovine Papular Stomatitis virus
Bovine Spongiform Encephalopathy (BSE) agent
Buffalopox virus
Bunyamwera virus
Bussuquara virus
Bwamba virus
California encephalitis virus
Candiru virus complex
Caraparu virus
Catu virus
Cercopithecine herpes virus 1
Chandipura virus
Changuinola virus
Chikungunya virus
Chim virus
Creutzfeld-Jakob Disease (CJD) agent
Colorado tick fever virus
Cote d'Ivoire Ebola virus
Cowpox virus
Crimea-Congo Haemorrhagic Fever Virus
Dakar bat virus
Dengue virus
Dhori virus
Dobrava-Belgrade virus
Dugbe virus
Duvenhage virus
Eastern equine encephalitis virus
Edge Hill virus
Encephalomyocarditis virus
European bat lyssavirus 1
European bat lyssavirus 2
European Tick-borne encephalitis virus
Everglades virus
Eyach virus
Far eastern Tick-borne encephalitis virus
Foot and mouth disease virus
Ganjam virus
Getah virus

Guama virus
Guanarito virus
Guaroa virus
Hantaan virus
Hendra virus
Hepatitis A virus
Hepatitis B virus
Hepatitis C virus
Hepatitis delta virus
Hepatitis E virus
Hepatitis G virus
HU39694 virus
Hughes virus
Human adenovirus A
Human adenovirus B
Human adenovirus C
Human adenovirus D
Human adenovirus E
Human adenovirus F
Human astrovirus
Human Coronavirus 229E
Human Coronavirus OC43
Human enterovirus 68
Human enterovirus 70
Human enterovirus A
Human enterovirus B
Human enterovirus C
Human enterovirus D
Human Herpesvirus 1
Human Herpesvirus 2
Human Herpesvirus 3
Human Herpesvirus 4
Human Herpesvirus 5
Human Herpesvirus 6
Human Herpesvirus 7
Human Herpesvirus 8
Human Immunodeficiency Virus 1
Human Immunodeficiency Virus 2
Human papillomavirus
Human parainfluenza virus 1
Human parainfluenza virus 2
Human parainfluenza virus 3
Human parainfluenza virus 4
Human parechovirus type 1

Human parechovirus type 2
Human Respiratory Syncytial virus
Human Rhinovirus A
Human Rhinovirus B
Human T-Lymphotropic Virus 1
Igbo-ora virus
Ilheus virus
Influenza A virus
Influenza B virus
Influenza C virus
Issyk-Kul virus
Japanese encephalitis virus
JC virus
Junin virus
Juquitiba virus
Karshi virus
Kasokero virus
Kedougou virus
Kemerovo virus
Kokobera virus
Koutango virus
Kyasanur forest disease virus
Laguna Negra virus
Lanjan virus
Lassa virus
Lebombo virus
Lechiguanas virus
Louping ill virus
Lymphocytic choriomeningitis virus
Machupo virus
Madrid virus
Marburg virus
Marituba virus
Mayaro virus
Measles virus
Menangle virus
Mimivirus*
Mokola virus
Molluscum contagiosum virus
Monkeypox virus
Monongahela virus
Mucambo virus
Mumps virus

Murray Valley encephalitis virus
New York virus
Newcastle disease virus
Nipah virus
Norwalk-like viruses
Nyando virus
Ockelbo virus
Omsk haemorrhagic fever virus
O'nyong-nyong virus
Oran virus
Orf virus
Oriboca virus
Oropouche virus
Orungo virus
Parvovirus B19
Phnom-Penh bat virus
Picobirnavirus
Piry virus
Poliovirus
Powassan virus
Pseudocowpox virus
Punta Toro virus
Puumala virus
Quaranfil Virus
Rabies virus
Reovirus*
Reston Ebola virus
Rift Valley fever virus
Rio Bravo virus
Rocio virus
Ross River virus
Rotavirus A
Rotavirus B
Rotavirus C
Rotavirus D
Rotavirus E
Rotavirus F
Royal Farm virus
Rubella virus
Sabia virus
Saimiriine herpesvirus 1
Salehabad virus
Sandfly fever Naples virus



Sandfly fever virus group
Saumarez Reef virus
Sealpox virus
Semliki Forest virus
Seoul virus
Sepik virus
Sin Nombre virus
Sindbis virus
St. Louis encephalitis virus
Sudan Ebola virus
Suid herpesvirus
Swine vesicular disease virus
Tacaiuma virus
Tamdy virus
Tanapox virus
Tataguine virus
Thogoto virus
Trubanaman virus
Tyuleniy virus
Usutu virus
Variola virus
Venezuelan Equine Encephalitis virus
Vesicular stomatitis virus
Wad Medani virus
Wanowrie virus
Wesselsbron virus
West Nile virus
Western Equine Encephalitis virus
Wyeomyia virus
Yaba monkey tumor virus
Yellow fever virus
Yogue virus
Zaire Ebola virus
Zika virus
Zinga virus

**Protozoa**

<i>Acanthamoeba astronyxis</i>
<i>Acanthamoeba castellani</i>
<i>Acanthamoeba culbertsoni</i>
<i>Acanthamoeba hatchetti</i>
<i>Acanthamoeba palestinensis</i>
<i>Acanthamoeba polyphaga</i>

<i>Acanthamoeba rhysoides</i>
<i>Babesia bovis</i>
<i>Babesia divergens</i>
<i>Babesia gibsoni</i>
<i>Babesia microti</i>
<i>Balamuthia mandrillaris</i>
<i>Balantidium coli</i>
<i>Blastocystis hominis</i>
<i>Cryptosporidium parvum</i>
<i>Cyclospora cayetanensis</i>
<i>Dientamoeba fragilis</i>
<i>Encephalitozoon cuniculi</i>
<i>Encephalitozoon hellem</i>
<i>Encephalitozoon intestinalis</i>
<i>Entamoeba chattoni</i>
<i>Entamoeba histolytica</i>
<i>Entamoeba moshkovskii</i>
<i>Enterocytozoon bieneusi</i>
<i>Giardia duodenalis</i>
<i>Isospora belli</i>
<i>Leishmania aethiopica</i>
<i>Leishmania amazonensis</i>
<i>Leishmania braziliensis</i>
<i>Leishmania chagasi</i>
<i>Leishmania donovani</i>
<i>Leishmania guyanensis</i>
<i>Leishmania infantum</i>
<i>Leishmania lainsoni</i>
<i>Leishmania major</i>
<i>Leishmania mexicana</i>
<i>Leishmania naiffi</i>
<i>Leishmania panamensis</i>
<i>Leishmania peruviana</i>
<i>Leishmania pifanoi</i>
<i>Leishmania shawi</i>
<i>Leishmania tropica</i>
<i>Leishmania venezuelensis</i>
<i>Naegleria fowleri</i>
<i>Nosema africanum</i>
<i>Nosema ceylonensis</i>
<i>Nosema connori</i>
<i>Nosema ocularum</i>
<i>Pentatrichomonas hominis</i>

<i>Plasmodium falciparum</i>
<i>Plasmodium knowlesi</i>
<i>Plasmodium malariae</i>
<i>Plasmodium ovale</i>
<i>Plasmodium simium</i>
<i>Plasmodium vivax</i>
<i>Retortamonas intestinalis</i>
<i>Sarcocystis hominis</i>
<i>Sarcocystis lindermanni</i>
<i>Sarcocystis suihominis</i>
<i>Toxoplasma gondii</i>
<i>Trachipleistophora hominis</i>
<i>Trichomonas tenax</i>
<i>Trichomonas vaginalis</i>
<i>Trypanosoma brucei</i>
<i>Trypanosoma cruzi</i>
<i>Vittaforma corneae</i>

**Helminths**

<i>Acanthocephalus rauschi</i>
<i>Achillurbainia nouveli</i>
<i>Achillurbainia recondita</i>
<i>Alaria americana</i>
<i>Alaria marcianae</i>
<i>Amphimerus pseudofelineus</i>
<i>Anatrichosoma cutaneum</i>
<i>Ancylostoma braziliense</i>
<i>Ancylostoma caninum</i>
<i>Ancylostoma ceylanicum</i>
<i>Ancylostoma duodenale</i>
<i>Ancylostoma malayanum</i>
<i>Anisakis physeteris</i>
<i>Anisakis simplex</i>
<i>Aonchotheca philippinensis</i>
<i>Apophallus donicus</i>
<i>Artyfechinostomum mehrai</i>
<i>Ascaris lumbricoides</i>
<i>Ascaris suum</i>
<i>Ascocotyle sp.</i>
<i>Australobilharzia terrigalensis</i>
<i>Baylisascaris procyonis</i>
<i>Bertiella mucronata</i>
<i>Bertiella studeri</i>

<i>Bilharziella polonica</i>
<i>Bolbosoma</i> sp.
<i>Brugia beaveri</i>
<i>Brugia guyanensis</i>
<i>Brugia malayi</i>
<i>Brugia pahangi</i>
<i>Brugia timori</i>
<i>Bunostomum phlebotomum</i>
<i>Calodium hepaticum</i>
<i>Carneocephallus brevicæa</i>
<i>Cathaemasia cabrerai</i>
<i>Centrocestus armatus</i>
<i>Centrocestus formosanus</i>
<i>Cheilospirura</i> sp.
<i>Clinostomum complanatum</i>
<i>Contracaecum osculatum</i>
<i>Corynosoma strumosum</i>
<i>Cryptocotyle lingua</i>
<i>Cyclodontostomum purvisi</i>
<i>Dicrocoelium dendriticum</i>
<i>Dicrocoelium hospes</i>
<i>Diectophyme renale</i>
<i>Dipetalonema arbuta</i>
<i>Dipetalonema reconditum</i>
<i>Diphyllbothrium cameroni</i>
<i>Diphyllbothrium cordatum</i>
<i>Diphyllbothrium dalliae</i>
<i>Diphyllbothrium dendriticum</i>
<i>Diphyllbothrium elegans</i>
<i>Diphyllbothrium erinaceieuropæi</i>
<i>Diphyllbothrium hians</i>
<i>Diphyllbothrium houghtoni</i>
<i>Diphyllbothrium klebanovskii</i>
<i>Diphyllbothrium lanceolatum</i>
<i>Diphyllbothrium latum</i>
<i>Diphyllbothrium mansonoides</i>
<i>Diphyllbothrium nihonkaiense</i>
<i>Diphyllbothrium orcini</i>
<i>Diphyllbothrium pacificum</i>
<i>Diphyllbothrium scoticum</i>
<i>Diphyllbothrium stemmacephalum</i>
<i>Diphyllbothrium theileri</i>
<i>Diplogonoporus balaenopterae</i>
<i>Diplogonoporus brauni</i>

<i>Diplogonoporus fukuokaensis</i>
<i>Diplostomum spathaceum</i>
<i>Dipylidium caninum</i>
<i>Dirofilaria immitis</i>
<i>Dirofilaria repens</i>
<i>Dirofilaria striata</i>
<i>Dirofilaria subdermata</i>
<i>Dirofilaria tenuis</i>
<i>Dirofilaria ursi</i>
<i>Dracunculus insignis</i>
<i>Dracunculus medinensis</i>
<i>Drepanidotaenia lanceolata</i>
<i>Echinochasmus japonicus</i>
<i>Echinochasmus jiufuensis</i>
<i>Echinochasmus perfoliatus</i>
<i>Echinococcus granulosus</i>
<i>Echinococcus multilocularis</i>
<i>Echinococcus oligarthus</i>
<i>Echinococcus vogeli</i>
<i>Echinoparyphium recurvatum</i>
<i>Echinostoma cinetorchis</i>
<i>Echinostoma echinatum</i>
<i>Echinostoma hortense</i>
<i>Echinostoma ilocanum</i>
<i>Echinostoma jassyense</i>
<i>Echinostoma macrorchis</i>
<i>Echinostoma malayanum</i>
<i>Echinostoma revolutum</i>
<i>Enterobius gregorii</i>
<i>Enterobius vermicularis</i>
<i>Episthmium caninum</i>
<i>Eucoleus aerophilus</i>
<i>Eurytrema pancreaticum</i>
<i>Eustrongylides sp.</i>
<i>Fasciola gigantica</i>
<i>Fasciola hepatica</i>
<i>Fasciola indica</i>
<i>Fasciolopsis buski</i>
<i>Fibricola seoulensis</i>
<i>Gastrodiscoides hominis</i>
<i>Gigantobilharzia huttoni</i>
<i>Gigantobilharzia sturniae</i>
<i>Gnathostoma doloresi</i>
<i>Gnathostoma hispidum</i>

<i>Gnathostoma nipponicum</i>
<i>Gnathostoma spinigerum</i>
<i>Gongylonema pulchrum</i>
<i>Gymnophalloides</i> sp.
<i>Haemonchus contortus</i>
<i>Haplorchis pumilo</i>
<i>Haplorchis taichui</i>
<i>Haplorchis vanissima</i>
<i>Haplorchis yokogawai</i>
<i>Heterobilharzia americana</i>
<i>Heterophyes dispar</i>
<i>Heterophyes heterophyes</i>
<i>Heterophyes nocens</i>
<i>Heterophyopsis continua</i>
<i>Himasthala muelhensi</i>
<i>Hymenolepis diminuta</i>
<i>Hymenolepis nana</i>
<i>Hypoderaeum conoideum</i>
<i>Inermicapsifer madagascariensis</i>
<i>Isoparorchis hypselobagri</i>
<i>Lagochilascaris minor</i>
<i>Ligula intestinalis</i>
<i>Loa loa</i>
<i>Macracanthorhynchus hirudinaceus</i>
<i>Macracanthorhynchus ingens</i>
<i>Mammomonogamus laryngeus</i>
<i>Mammomonogamus nasicola</i>
<i>Mansonella ozzardi</i>
<i>Mansonella perstans</i>
<i>Mansonella rodhaini</i>
<i>Mansonella semiclarum</i>
<i>Mansonella streptocerca</i>
<i>Marshallagia marshalli</i>
<i>Mathevotaenia symmetrica</i>
<i>Mecistocirrus digitatus</i>
<i>Meningonema peruzzii</i>
<i>Mesocestoides lineatus</i>
<i>Mesocestoides variabilis</i>
<i>Metagonimus minutus</i>
<i>Metagonimus yokogawai</i>
<i>Metastrongylus elongatus</i>
<i>Metorchis albidus</i>
<i>Metorchis conjunctus</i>
<i>Microfilaria bolivarensis</i>

<i>Micronema deletrix</i>
<i>Moniezia expansa</i>
<i>Moniliformis moniliformis</i>
<i>Multiceps brauni</i>
<i>Multiceps glomeratus</i>
<i>Multiceps longihamatus</i>
<i>Multiceps multiceps</i>
<i>Multiceps serialis</i>
<i>Nanophyetus salmincola</i>
<i>Necator americanus</i>
<i>Nematodirus abnormalis</i>
<i>Neodiplostomum</i> sp.
<i>Oesophagostomum aculeatum</i>
<i>Oesophagostomum bifurcum</i>
<i>Oesophagostomum stephanostomum</i>
<i>Onchocerca volvulus</i>
<i>Opisthorchis (Chlonorchis) sinensis</i>
<i>Opisthorchis felinus</i>
<i>Opisthorchis guayaquilensis</i>
<i>Opisthorchis novae</i>
<i>Opisthorchis viverrini</i>
<i>Orientobilharzia turkestanica</i>
<i>Ornithobilharzia</i> sp.
<i>Ostertagia ostertagi</i>
<i>Paragonimus africanus</i>
<i>Paragonimus bankokensis</i>
<i>Paragonimus caliensis</i>
<i>Paragonimus heterotremus</i>
<i>Paragonimus hueitungensis</i>
<i>Paragonimus kellicotti</i>
<i>Paragonimus mexicanus</i>
<i>Paragonimus miyazakii</i>
<i>Paragonimus ohirai</i>
<i>Paragonimus philippinensis</i>
<i>Paragonimus sadoensis</i>
<i>Paragonimus siamensis</i>
<i>Paragonimus skrjabini</i>
<i>Paragonimus uterobilateralis</i>
<i>Paragonimus westermani</i>
<i>Parascaris equorum</i>
<i>Parastrongylus cantonensis</i>
<i>Parastrongylus costaricensis</i>
<i>Pearsonema plica</i>
<i>Pelodera strongyloides</i>

<i>Phaneropsolus bonnei</i>
<i>Philophthalmus lacrymosus</i>
<i>Phocanema decipiens</i>
<i>Physaloptera caucasica</i>
<i>Physaloptera transfuga</i>
<i>Plagiorchis harinasutai</i>
<i>Plagiorchis javensis</i>
<i>Plagiorchis muris</i>
<i>Plagiorchis philippinensis</i>
<i>Poikilorchis congolensis</i>
<i>Procerovum calderoni</i>
<i>Prohemistomum vivax</i>
<i>Prosthodendrium molenkampii</i>
<i>Pseudamphistomum aethiopicum</i>
<i>Pseudamphistomum truncatum</i>
<i>Psilorchis hominis</i>
<i>Pygidiopsis summa</i>
<i>Pyramicocephalus anthrocephalus</i>
<i>Raillietina celebensis</i>
<i>Raillietina demerariensis</i>
<i>Rhabditis elongata</i>
<i>Rhabditis inermis</i>
<i>Rhabditis niellyi</i>
<i>Rhabditis pellio</i>
<i>Rictularia sp.</i>
<i>Schistocephalus solidus</i>
<i>Schistosoma bovis</i>
<i>Schistosoma haematobium</i>
<i>Schistosoma intercalatum</i>
<i>Schistosoma japonicum</i>
<i>Schistosoma malayensis</i>
<i>Schistosoma mansoni</i>
<i>Schistosoma mattheei</i>
<i>Schistosoma mekongi</i>
<i>Schistosoma rodhaini</i>
<i>Schistosoma spindale</i>
<i>Schistosomatium douthitti</i>
<i>Setaria equina</i>
<i>Spirocerca lupi</i>
<i>Stellantchasmus falcatus</i>
<i>Stictodora fuscata</i>
<i>Strongyloides fuelleborni</i>
<i>Strongyloides papillosus</i>
<i>Strongyloides ransomi</i>



<i>Strongyloides stercoralis</i>
<i>Strongyloides westeri</i>
<i>Syphacea obvelata</i>
<i>Taenia crassiceps</i>
<i>Taenia saginata</i>
<i>Taenia solium</i>
<i>Taenia taeniaeformis</i>
<i>Teladorsagia circumcincta</i>
<i>Ternidens deminutus</i>
<i>Thelazia californiensis</i>
<i>Thelazia callipaeda</i>
<i>Thelazia rhodesii</i>
<i>Toxascaris leonina</i>
<i>Toxocara canis</i>
<i>Toxocara cati</i>
<i>Trichinella britovi</i>
<i>Trichinella nativa</i>
<i>Trichinella nelsoni</i>
<i>Trichinella pseudospiralis</i>
<i>Trichinella spiralis</i>
<i>Trichinella T5</i>
<i>Trichobilharzia brevis</i>
<i>Trichobilharzia ocellata</i>
<i>Trichobilharzia stagnicolae</i>
<i>Trichostrongylus affinis</i>
<i>Trichostrongylus axei</i>
<i>Trichostrongylus brevis</i>
<i>Trichostrongylus calcaratus</i>
<i>Trichostrongylus capricola</i>
<i>Trichostrongylus colubriformis</i>
<i>Trichostrongylus instabilis</i>
<i>Trichostrongylus lerouxi</i>
<i>Trichostrongylus orientalis</i>
<i>Trichostrongylus probolurus</i>
<i>Trichostrongylus skrjabini</i>
<i>Trichostrongylus vitrinus</i>
<i>Trichuris suis</i>
<i>Trichuris trichiura</i>
<i>Trichuris vulpis</i>
<i>Uncinaria stenocephala</i>
<i>Watsonius watsoni</i>
<i>Wuchereria bancrofti</i>
<i>Wuchereria lewisi</i>

**Fungi**

<i>Absidia corymbifera</i>
<i>Acremonium alabamense</i>
<i>Acremonium curvulum</i>
<i>Acremonium falciforme</i>
<i>Acremonium kiliense</i>
<i>Acremonium potronii</i>
<i>Acremonium recifei</i>
<i>Acremonium roseogriseum</i>
<i>Acremonium strictum</i>
<i>Acrophialophora fusicarpa</i>
<i>Actinomadura madurae</i>
<i>Actinomadura pelletieri</i>
<i>Alternaria alternata</i>
<i>Alternaria chlamydospora</i>
<i>Alternaria dianthicola</i>
<i>Alternaria infectoria</i>
<i>Alternaria longipes</i>
<i>Alternaria stemphyloides</i>
<i>Alternaria tenuissima</i>
<i>Aphanoascus fulvescens</i>
<i>Apophysomyces elegans</i>
<i>Arthrrium phaeospermum</i>
<i>Arthrographis kelrae*</i>
<i>Aspergillus candidus</i>
<i>Aspergillus clavatus</i>
<i>Aspergillus fisherianus</i>
<i>Aspergillus flavipes</i>
<i>Aspergillus flavus</i> group
<i>Aspergillus fumigatus</i> group
<i>Aspergillus glaucus</i>
<i>Aspergillus nidulans</i> group
<i>Aspergillus niger</i>
<i>Aspergillus oryzae</i>
<i>Aspergillus terreus</i> group
<i>Aspergillus versicolor</i>
<i>Aspergillus wentii</i>
<i>Aureobasidium pullulans</i>
<i>Basidiobolus ranarum</i>
<i>Beauveria bassiana</i>
<i>Bipolaris australiensis</i>
<i>Bipolaris hawaiiensis</i>
<i>Bipolaris spicifera</i>

<i>Blastomyces dermatitidis</i>
<i>Blastoschizomyces capitatus</i>
<i>Botryomyces caespitosus</i>
<i>Botryosphaeria subglobosa</i>
<i>Candida albicans</i>
<i>Candida catenulata</i>
<i>Candida famata</i>
<i>Candida glabrata</i>
<i>Candida guilliermondii</i>
<i>Candida haemulonis</i>
<i>Candida intermedia</i>
<i>Candida kefyr</i>
<i>Candida krusei</i>
<i>Candida lambica</i>
<i>Candida lipolytica</i>
<i>Candida lusitaniae</i>
<i>Candida norvegensis</i>
<i>Candida parapsilosis</i>
<i>Candida rugosa</i>
<i>Candida tropicalis</i>
<i>Candida viswanathii</i>
<i>Candida zeylanoides</i>
<i>Cephalophora irregularis</i>
<i>Cerinosterus cyanescens</i>
<i>Chaetomium atrobtunneum</i>
<i>Chaetomium funicola</i>
<i>Chaetomium globosum</i>
<i>Chaetomium perpulchrum</i>
<i>Chaetomium strumarium</i>
<i>Chaetophoma dermo-unguis</i>
<i>Chlamydoabsidia padenii</i>
<i>Chlorella protothecoides</i>
<i>Chryosporium zonatum*</i>
<i>Chrysonilia sitophila</i>
<i>Cladophialophora arxii</i>
<i>Cladophialophora bantiana</i>
<i>Cladophialophora boppii</i>
<i>Cladophialophora carrionii</i>
<i>Cladophialophora devriesii</i>
<i>Cladorrhinum bulbillosum</i>
<i>Cladosporium cladosporioides</i>
<i>Cladosporium elatum</i>
<i>Cladosporium oxysporum</i>
<i>Cladosporium sphaerospermum</i>

<i>Coccidioides immitis</i>
<i>Cokeromyces recurvatus</i>
<i>Colletotrichum coccodes</i>
<i>Colletotrichum dematium</i>
<i>Colletotrichum gloeosporioides</i>
<i>Conidiobolus coronatus</i>
<i>Conidiobolus incongruus</i>
<i>Conidiobolus lamprauges</i>
<i>Coniothyrium fuckelii</i>
<i>Coprinus cinereus</i>
<i>Cryptococcus neoformans</i>
<i>Cunninghamella bertholletiae</i>
<i>Curvularia brachyspora</i>
<i>Curvularia clavata</i>
<i>Curvularia geniculata</i>
<i>Curvularia lunata</i>
<i>Curvularia pallescens</i>
<i>Curvularia senegalensis</i>
<i>Curvularia veruculosa</i>
<i>Cylindrocarpon cyanescens</i>
<i>Cylindrocarpon lichenicola</i>
<i>Cylindrocarpon vaginae</i>
<i>Dichotomophthora portulacae</i>
<i>Dichotomophthoropsis nymphaerum</i>
<i>Dissitimurus exedrus</i>
<i>Doratomyces stemonitis</i>
<i>Drechslera biseptata</i>
<i>Emmonsia crescens</i>
<i>Emmonsia parva</i>
<i>Engyodontium album</i>
<i>Epidermophyton floccosum</i>
<i>Exophiala dermatitidis</i>
<i>Exophiala jeanselmei</i>
<i>Exophiala moniliae</i>
<i>Exophiala pisciphila</i>
<i>Exophiala psychrophila</i>
<i>Exophiala salmonis</i>
<i>Exophiala spinifera</i>
<i>Exserohilum longirostratum</i>
<i>Exserohilum macginnisii</i>
<i>Fusarium aquaeductuum</i>
<i>Fusarium chlamydosporum</i>
<i>Fusarium dimerum</i>
<i>Fusarium incarnatum</i>

<i>Fusarium moniliforme</i>
<i>Fusarium napiforme</i>
<i>Fusarium nivale</i>
<i>Fusarium oxysporum</i>
<i>Fusarium pallidoroseum</i>
<i>Fusarium proliferatum</i>
<i>Fusarium sacchari</i>
<i>Fusarium solani</i>
<i>Fusarium subglutinans</i>
<i>Fusarium ventricosum</i>
<i>Fusarium verticillioides</i>
<i>Geotrichum candidum*</i>
<i>Hansenula anomala</i>
<i>Histoplasma capsulatum</i>
<i>Hortaea werneckii</i>
<i>Lasiodiplodia theobromae</i>
<i>Lecythophora hoffmannii</i>
<i>Lecythophora mutabilis</i>
<i>Leptosphaeria senegalensis</i>
<i>Leptosphaeria tompkinsii</i>
<i>Loboa lobo</i>
<i>Madurella grisea</i>
<i>Madurella mycetomatis</i>
<i>Malassezia furfur</i>
<i>Malassezia globosa</i>
<i>Malassezia obtusa</i>
<i>Malassezia pachydermatis</i>
<i>Malassezia restricta</i>
<i>Malassezia slooffiae</i>
<i>Malassezia sympodialis</i>
<i>Microascus cinereus</i>
<i>Microascus cirrosus</i>
<i>Microsporum audouinii</i>
<i>Microsporum canis</i>
<i>Microsporum equinum</i>
<i>Microsporum ferrugineum</i>
<i>Microsporum fulvum</i>
<i>Microsporum gallinae</i>
<i>Microsporum gypseum</i>
<i>Microsporum nanum</i>
<i>Microsporum persicolor</i>
<i>Microsporum praecox</i>
<i>Microsporum racemosum</i>
<i>Microsporum vanbreuseghemii</i>

<i>Moniliella suavelolens</i>
<i>Mucor circinelloides</i>
<i>Mucor hiemalis</i>
<i>Mucor indicus</i>
<i>Mucor racemosus</i>
<i>Mucor ramosissimus</i>
<i>Myceliophthora thermophila</i>
<i>Mycocentrospora acerina</i>
<i>Mycoleptodiscus indicus</i>
<i>Myriodontium keratinophilum</i>
<i>Nannizzia cajetani</i>
<i>Nattrassia mangiferae</i>
<i>Neocosmospora vasinfecta</i>
<i>Neotestudina rosatii</i>
<i>Nigrospora sphaerica</i>
<i>Ochroconis gallopava</i>
<i>Oidiodendron cerealis</i>
<i>Onychocola canadensis</i>
<i>Ovadendron ochraceum</i>
<i>Ovadendron sulphureo-ochraceum</i>
<i>Paecilomyces farinosus</i>
<i>Paecilomyces fumerosoreus</i>
<i>Paecilomyces javanicus</i>
<i>Paecilomyces lilacinus</i>
<i>Paecilomyces marquandii</i>
<i>Paecilomyces variotii</i>
<i>Paecilomyces viridis</i>
<i>Paracoccidioides brasiliensis</i>
<i>Penicillium chrysogenum</i>
<i>Penicillium citrinum</i>
<i>Penicillium commune</i>
<i>Penicillium decumbens</i>
<i>Penicillium dupontii</i>
<i>Penicillium expansum</i>
<i>Penicillium marneffeii</i>
<i>Penicillium purpurogenum</i>
<i>Phaeoanellomyces elegans</i>
<i>Phaeoanellomyces werneckii</i>
<i>Phaeosclera dematioides</i>
<i>Phaeotrichoconis crotalariae</i>
<i>Phialemonium curvatum</i>
<i>Phialemonium obovatum</i>
<i>Phialophora bubakii</i>
<i>Phialophora pedrosoi</i>

<i>Phialophora repens</i>
<i>Phialophora richardsiae</i>
<i>Phialophora verrucosa</i>
<i>Phoma cava</i>
<i>Phoma cruris-hominis</i>
<i>Phoma eupyrena</i>
<i>Phoma glomerata</i>
<i>Phoma herbarum</i>
<i>Phoma hibernica</i>
<i>Phoma minutella</i>
<i>Phoma oculo-hominis</i>
<i>Phyllosticta citricarpa</i>
<i>Piedraia hortae</i>
<i>Pleurophoma pleurospora</i>
<i>Pneumocystis carinii</i>
<i>Prototheca wickerhamii</i>
<i>Prototheca zopfii</i>
<i>Pseudoallescheria boydii</i>
<i>Pseudomicrodochium suttonii</i>
<i>Pyrenochaeta mackinnonii</i>
<i>Pyrenochaeta romeroi</i>
<i>Pyrenochaeta unguis-hominis</i>
<i>Pythium insidiosum</i>
<i>Rhinochrysiella aquaspersa</i>
<i>Rhinochrysiella compacta</i>
<i>Rhinochrysiella obovoidea</i>
<i>Rhinochrysiella schulzeri</i>
<i>Rhinosporidium seeberi</i>
<i>Rhizomucor miehei</i>
<i>Rhizomucor pusillus</i>
<i>Rhizopus azygosporus</i>
<i>Rhizopus microsporus</i>
<i>Rhizopus oryzae</i>
<i>Rhizopus stolonifer</i>
<i>Rhodotorula glutinis</i>
<i>Rhodotorula minuta</i>
<i>Rhodotorula mucilaginosa</i>
<i>Rhodotorula rubra</i>
<i>Saccharomyces cerevisiae</i>
<i>Saksenaea vasiformis</i>
<i>Sarcinomyces phaeomuriformis</i>
<i>Scedosporium prolificans</i>
<i>Schizophyllum commune</i>
<i>Scolecobasidium humicola</i>

<i>Scolecobasidium tshawytschae</i>
<i>Scopulariopsis acremonium</i>
<i>Scopulariopsis asperula</i>
<i>Scopulariopsis brevicaulis</i>
<i>Scopulariopsis brumptii</i>
<i>Scopulariopsis candida</i>
<i>Scopulariopsis flava</i>
<i>Scopulariopsis fusca</i>
<i>Scytalidium hyalinum</i>
<i>Scytalidium infestans</i>
<i>Setosphaeria rostrata</i>
<i>Sporotrichum pruinsum</i> *
<i>Sporothrix schenckii</i>
<i>Stachybotrys chartarum</i> *
<i>Stemphylium macrosporoideum</i> *
<i>Stenella araguata</i>
<i>Streptomyces somaliensis</i>
<i>Taeniolella exilis</i>
<i>Taeniolella stilbaspora</i>
<i>Tetraploa aristata</i>
<i>Thermomyces lanuginosus</i>
<i>Torulopsis magnoliae</i>
<i>Trichoderma pseudokoningii</i>
<i>Trichoderma viride</i>
<i>Trichomaris invadens</i>
<i>Trichophyton ajelloi</i>
<i>Trichophyton concentricum</i>
<i>Trichophyton equinum</i>
<i>Trichophyton gallinae</i>
<i>Trichophyton gourvilii</i>
<i>Trichophyton megninii</i>
<i>Trichophyton mentagrophytes</i>
<i>Trichophyton rubrum</i>
<i>Trichophyton schoenleinii</i>
<i>Trichophyton simii</i>
<i>Trichophyton soudanense</i>
<i>Trichophyton tonsurans</i>
<i>Trichophyton verrucosum</i>
<i>Trichophyton violaceum</i>
<i>Trichosporon asahii</i>
<i>Trichosporon beigelii</i>
<i>Trichosporon cutaneum</i>
<i>Trichosporon inkin</i>
<i>Trichosporon mucoides</i>



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<i>Trichosporon ovoides</i>
<i>Tritirachium oryzae</i>
<i>Tubercularia vulgaris</i>
<i>Ulocladium chartarum</i>
<i>Veronaea botryosa</i>
<i>Verticillium nigrescens</i>
<i>Volutella cinerescens</i>

\*Added by EPA