

BACTERIA –Complete list and description

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Acetobacter –used in the production of vinegar, they turn wine (give it that vinegar taste), used to acidify beer...not supposed to cause disease.

A. aceti	A. lovaniensis	A. pasteurianus
A. cerevisiae	A. malorum	A. peroxydans
A. cibinongensis	A. nitrogenifigens	A. pomorum
A. estunensis	A. oeni	A. syzygii
A. indonesiensis	A. orientalis	A. tropicalis
A. liquefaciens	A. orleanensis	A. xylinus

Acholeplasma -a bacteria found on animals, plants and some insects...not supposed to cause disease.

A. axanthum	A. hippikon	A. oculi
A. brassicae	A. laidlawii	A. palmae
A. cavigenitalium	A. modicum	A. parvum
A. equifetale	A. morum	A. pleciae
A. granularum	A. multilocale	A. vituli

Acidovorax -causes bacterial fruit blotch on cucurbit (melons, gourds, cucumbers, squash, pumpkins) crops. Also been found in bottled water.

A. aerodnitrificans	A. delafieldii	A. valerianellae
A. anthurii	A. facilis	A. wohlfahtii
A. avenae	A. konjaci	
A. defluvii	A. temperans	

Acinetobacter -source of infection in debilitated patients in the hospital, utensils, kitchen sponge, even live on human skin.

A. baumannii	A. haemolyticus
A. calcoaceticus-baumannii	A. lwoffii

Actinobacillus –pathogens of birds and reptiles; occur in the respiratory tract of healthy humans and may be involved in the pathogenesis of sinusitis, bronchopneumonia, and meningitis. A. actinomycetemcomitans occurs in the human oral microflora, but are known to cause endocarditis.

A. actinomycetemcomitans	A. indolicus	A. rossii
A. arthritidis	A. lignieresii	A. scotiae
A. capsulatus	A. minor	A. seminis
A. delphinicola	A. muris	A. succinogenes
A. equuli	A. pleuropneumoniae	A. suis
A. hominis	A. porcinus	A. ureae

Actinomyces -opportunistic pathogens of humans and other mammals, particularly in the oral cavity; can cause actinomycosis, a disease characterized by the formation of abscesses in the mouth, lungs, or the gastrointestinal tract. Known to cause skin, bone, joint problems, abscesses, pain, fever and lameness in dogs.

A. bovis	A. graevenitzi	A. odontolyticus
A. bowdenii	A. hongkongensis	A. oricola
A. canis	A. hordeovulneris	A. radidentis
A. cardiffensis	A. howellii	A. radinae
A. catuli	A. humiferus	A. slackii
A. coleocanis	A. hyovaginalis	A. streptomycini
A. dentalis	A. israelii	A. suimastitidis
A. denticolens	A. marimammalium	A. suis
A. europaeus	A. meyeri	A. turicensis
A. funkei	A. naeslundii	A. urogenitalis
A. georgiae	A. nasicola	A. vaccimaxillae
A. gerencseriae	A. neuii	A. viscosus

Aeromonas –found in contaminated water, mainly cause gastroenteritis, wound infections or opportunistic systemic disease in immunocompromised patients.

A. allosaccharophila	A. ichthiosmia	A. schubertii
A. bestiarum	A. jandaei	A. sharmana
A. bivalvium	A. media	A. simiae
A. encheleia	A. molluscorum	A. sobria
A. enteropelogenes	A. popoffii	A. veronii
A. euchenophila	A. punctata	
A. hydrophila	A. salmonicida	

Agrobacterium -serious pathogen of walnuts, grape vines, stone fruits, nut trees, sugar beets, horse radish and rhubarb; causes crown-gall in plants.

A. diobacter	A. rubi
A. rhizogenes	A. tumefaciens

Anaplasma -transmitted by natural means through ticks or infected needles, surgical equipment, etc. Causes symptoms similar to the flu.

Anaplasma phagocytophilum

Atopobium -part of vaginal bacteria, responsible for 50% of bacterial vaginosis.

A. fossor	A. parvulum	A. vaginae
A. minutum	A. rimae	

Bacillus -Two Bacillus species are considered medically significant: *B. anthracis*, which causes anthrax, and *B. cereus*, which causes a foodborne illness similar to that of *Staphylococcus*. A third species, *B. thuringiensis*, is an important insect pathogen, and is sometimes used to control insect pests. *B. subtilis* is a notable food spoiler, causing ropiness in bread and related food. *B. coagulans* is also important in food spoilage.

<i>B. alcalophilus</i>	<i>B. flavothermus</i>	<i>B. pantothenicus</i>
<i>B. alvei</i>	<i>B. fusiformis</i>	<i>B. polymyxa</i>
<i>B. amyloliquefaciens</i>	<i>B. globigii</i>	<i>B. pseudoanthracis</i>
<i>B. aneurinolyticus</i>	<i>B. infernus</i>	<i>B. pumilus</i>
<i>B. anthracis</i>	<i>B. larvae</i>	<i>B. schlegelii</i>
<i>B. aquaemaris</i>	<i>B. laterosporus</i>	<i>B. sphaericus</i>
<i>B. brevis</i>	<i>B. lentus</i>	<i>B. sporothermodurans</i>
<i>B. caldolyticus</i>	<i>B. licheniformis</i>	<i>B. stearothermophilus</i>
<i>B. centrosporus</i>	<i>B. megaterium</i>	<i>B. subtilis</i>
<i>B. cereus</i>	<i>B. mesentericus</i>	<i>B. thermoglucosidasius</i>
<i>B. circulans</i>	<i>B. mucilaginosus</i>	<i>B. thuringiensis</i>
<i>B. coagulans</i>	<i>B. mycoides</i>	<i>B. vulgatus</i>
<i>B. firmus</i>	<i>B. natto</i>	<i>B. weihenstephanensis</i>

Bacteroides -making up the most substantial portion of the mammalian gastrointestinal flora, supposed to keep the bad guys away

<i>B. acidifaciens</i>	<i>B. ovatus</i>	<i>B. tectus</i>
<i>B. distasonis</i>	<i>B. putredinis</i>	<i>B. thetaiotaomicron</i>
<i>B. gracilis</i>	<i>B. pyogenes</i>	<i>B. vulgatus</i>
<i>B. fragilis</i>	<i>B. stercoris</i>	
<i>B. oris</i>	<i>B. suis</i>	

Bartonella -transmitted by insect vectors such as fleas, sand flies, lice and mosquitoes. Causes cat scratch disease in cats affecting the lymph nodes.

<i>B. alsatica</i>	<i>B. grahamii</i>	<i>B. talpae</i>
<i>B. bacilliformis</i>	<i>B. henselae</i>	<i>B. taylorii</i>
<i>B. birtlesii</i>	<i>B. koehlerae</i>	<i>B. tribocorum</i>
<i>B. bovis</i>	<i>B. muris</i>	<i>B. vinsonii</i> spp. <i>arupensis</i>
<i>B. capreoli</i>	<i>B. peromysci</i>	<i>B. vinsonii</i> spp. <i>berkhoffii</i>
<i>B. clarridgeiae</i>	<i>B. quintana</i>	<i>B. vinsonii</i> spp. <i>vinsonii</i>
<i>B. doshiae</i>	<i>B. rochalimae</i>	<i>B. washoensis</i>
<i>B. elizabethae</i>	<i>B. schoenbuchii</i>	

Bifidobacterium -Bifidobacteria are one of the major genera of bacteria that make up the gut flora, the bacteria that reside in the colon. Bifidobacteria aid in digestion, are associated with a lower incidence of allergies and also prevent some forms of tumor growth. Some bifidobacteria are used as probiotics.

<i>B. adolescentis</i>	<i>B. cuniculi</i>	<i>B. minimum</i>
<i>B. angulatum</i>	<i>B. denticolens</i>	<i>B. pseudocatenulatum</i>
<i>B. animalis</i>	<i>B. dentium</i>	<i>B. pseudolongum</i>
<i>B. asteroides</i>	<i>B. gallicum</i>	<i>B. pullorum</i>
<i>B. bifidum</i>	<i>B. gallinarum</i>	<i>B. ruminantium</i>
<i>B. boum</i>	<i>B. indicum</i>	<i>B. saeculare</i>
<i>B. breve</i>	<i>B. inopinatum</i>	<i>B. subtile</i>
<i>B. catenulatum</i>	<i>B. longum</i>	<i>B. thermacidophilum</i>
<i>B. choerinum</i>	<i>B. magnum</i>	<i>B. thermophilum</i>
<i>B. coryneforme</i>	<i>B. merycicum</i>	

Bordetella -spread through contact with infected people/animals, causes pertussis or whooping cough, or kennel cough in dogs, cats and pigs.

<i>B. ansorpii</i>	<i>B. hinzii</i>	<i>B. pertussis</i>
<i>B. avium</i>	<i>B. holmesii</i>	<i>B. petrii</i>
<i>B. bronchiseptica</i>	<i>B. parapertussis</i>	<i>B. trematum</i>

Borrelia -transmitted primarily by ticks and some by lice. Causes lyme disease and relapsing fever.

<i>B. afzelii</i>	<i>B. garinii</i>	<i>B. valaisiana</i>
<i>B. anserina</i>	<i>B. hermsii</i>	<i>B. vincentii</i>
<i>B. burgdorferi</i>	<i>B. recurrentis</i>	

Brevibacterium *linens* is ubiquitously present on the human skin, where it causes foot odor. The same bacterium is also employed to ferment several cheeses such as Limburger, Port-du-Salut and Näsäl. Its smell also attracts mosquitoes.

<i>B. acetyllicum</i>	<i>B. frigoritolerans</i>	<i>B. oxydans</i>
<i>B. albidum</i>	<i>B. halotolerans</i>	<i>B. paucivorans</i>
<i>B. antiquum</i>	<i>B. immotum</i>	<i>B. permense</i>
<i>B. aurantiacum</i>	<i>B. iodium</i>	<i>B. picturae</i>
<i>B. avium</i>	<i>B. linens</i>	<i>B. samyangense</i>
<i>B. casei</i>	<i>B. luteolum</i>	<i>B. sanguinis</i>
<i>B. celere</i>	<i>B. luteum</i>	<i>B. stationis</i>
<i>B. divaricatum</i>	<i>B. mcbrellneri</i>	
<i>B. epidermidis</i>	<i>B. otitidis</i>	

Brucella -It is transmitted by ingesting infected food, direct contact with an infected animal, or inhalation of aerosols. In animals it causes failure to conceive, abortion, swollen testicles, swollen lymph nodes.

<i>B. abortus</i>	<i>B. melitensis</i>	<i>B. pinnipedialis</i>
<i>B. canis</i>	<i>B. microti</i>	<i>B. suis</i> -infect pigs
<i>B. ceti</i>	<i>B. neotomae</i>	
<i>B. inopinata</i>	<i>B. ovis</i>	

Burkholderia -responsible for glanders, a disease that occurs mostly in horses and related animals; an important pathogen of pulmonary infections in people with cystic fibrosis; can be plant pathogen although used as a pesticide; some are considered biological grade species.

B. ambifaria	B. graminis	B. sacchari
B. andropogonis	B. hospita	B. singaporensis
B. anthina	B. kirkii	B. sordidicola
B. brasiliensis	B. kururiensis	B. stabilis
B. caledonica	B. mallei	B. terricola
B. calva	B. multivorans	B. thailandensis
B. caribensis	B. nigropunctata	B. tropica
B. caryophylli	B. oklahomensis	B. tuberum
B. cenocepacia	B. phenazinium	B. ubonensis
B. cepacia	B. phenoliruptrix	B. unamae
B. dolosa	B. phymatum	B. verschuerenii
B. fungorum	B. phytofirmans	B. vietnamiensis
B. gladioli	B. plantarii	B. xenovorans
B. glathei	B. pseudomallei	
B. glumae	B. pyrrocinia	

Campylobacter -C. fetus is a cause of spontaneous abortions in cattle and sheep, as well as an opportunistic pathogen in humans. In dogs and cats it causes diarrhea, often bloody, and reluctance to eat. It is the only Campylobacter species that can give septicemia. Bacteremia can lead to localized infections of the meninges in the brain, the pleural spaces or lungs, joints, the pericardial sac around the heart, or the peritoneum.

C. coli	C. hominis	C. mucosalis
C. concisus	C. hyointestinalis	C. rectus
C. curvus	C. insulaenigrae	C. showae
C. fetus	C. jejuni	C. sputorum
C. gracilis	C. lanienae	C. upsaliensis
C. helveticus	C. lari	

Capnocytophaga -normal flora of cats and dogs but causes infection and periodontal disease in humans.

C. canimorsus	C. granulosa	C. sputigena
C. cynodegmi	C. haemolytica	
C. gingivalis	C. ochracea	

Cardiobacterium -one of several bacteria normally present in the respiratory tract. However, it may also rarely cause endocarditis, an infection of the heart valves.
Cardiobacterium hominis

Cedecea -rare bacteria found in cases after transplant procedures.

C. davisae	C. neteri	C. species 012
C. lapegei	C. species 001	

Chlamydophila

C. abortus	-infects animals and causes abortions
C. caviae	-causes eye disease and genital tract issue in guinea pigs
C. felis	-causes inflammation of feline conjunctiva, rhinitis and respiratory problems
C. pecorum	-causes all manner of disease in animals
C. pneumoniae	-common cause of pneumonia
C. psittaci	-can cause respiratory issues, often acquired from an animal
C. trachomatis	-infects genitals of men and woman, can cause infection in throat, rectum and eyes as well.

Chryseobacterium -often found in raw milk

C. bovis	C. haifense	C. oranimense
C. greenlandensis		

Citrobacter -found almost everywhere in soil, water, wastewater, etc. It can also be found in the human intestine.

C. amalonaticus	C. gilleni	C. sedlakii
C. braakii	C. koseri	C. werkmanii
C. farmeri	C. murliniae	C. youngae
C. freundii	C. rodentium	

Clavibacter

C. michiganensis insidiosus	-infects alfalfa
C. michiganensis nebraskensis	-infects corn
C. michiganensis sepedonicus	-causes 'potato rot'
C. michiganensis tessellarius	-infects wheat

Cloacibacterium -found in sewage.

C. normanense

Clostridium –gives dogs and cats intermittent diarrhea. Most notable strains: *C. botulinum* –causes botulism, got Botox? *C. difficile* –can cause colitis. *C. perfringens* –causes enterotoxemia. *C. tetani* –causes tetanus

<i>C. acetobutylicum</i>	<i>C. fallax</i>	<i>C. phytofermentans</i>
<i>C. argentinense</i>	<i>C. feseri</i>	<i>C. piliforme</i>
<i>C. aerotolerans</i>	<i>C. formicaceticum</i>	<i>C. ramosum</i>
<i>C. baratii</i>	<i>C. histolyticum</i>	<i>C. scatologenes</i>
<i>C. beijerinckii</i>	<i>C. innocuum</i>	<i>C. septicum</i>
<i>C. bifermentans</i>	<i>C. kluyveri</i>	<i>C. sordellii</i>
<i>C. botulinum</i>	<i>C. ljungdahlii</i>	<i>C. sporogenes</i>
<i>C. butyricum</i>	<i>C. laramie</i>	<i>C. tertium</i>
<i>C. cadaveris</i>	<i>C. lavalense</i>	<i>C. tetani</i>
<i>C. chauvoei</i>	<i>C. nigrificans</i>	<i>C. thermocellum</i>
<i>C. clostridioforme</i>	<i>C. novyi</i>	<i>C. thermosaccharolyticum</i>
<i>C. colicanis</i>	<i>C. oedematiens</i>	<i>C. tyrobutyricum</i>
<i>C. difficile</i>	<i>C. paraputrificum</i>	
<i>C. estertheticum</i>	<i>C. perfringens</i>	

Collinsella –thought to be a natural antimicrobial in the human gut but little is known for sure.

<i>C. aerofaciens</i>	<i>C. intestinalis</i>	<i>C. stercoris</i>
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Corynebacterium –the italics species below are known to be pathogenic, *C. diphtheria* being the most pathogenic and causes diphtheria. Yet some strains are non-pathogenic and can be found in the normal mucosa and skin flora of humans.

<i>C. accolens</i>	<i>C. glutamicum</i>	<i>C. propinquum</i>
<i>C. afermentans</i>	<i>C. granulosum</i>	<i>C. pseudodiphtheriticum</i>
<i>C. amycolatum</i>	<i>C. haemolyticum</i>	<i>C. pseudotuberculosis</i>
<i>C. aquaticum</i>	<i>C. halofytica</i>	<i>C. pyogenes</i>
<i>C. argentoratense</i>	<i>C. hofmannii</i>	<i>C. renale</i>
<i>C. auris</i>	<i>C. jeikeium</i>	<i>C. spec</i>
<i>C. bovis</i>	<i>C. macginleyi</i>	<i>C. striatum</i>
<i>C. diphtheriae</i>	<i>C. matruchotii</i>	<i>C. tenuis</i>
<i>C. equi</i>	<i>C. minutissimum</i>	<i>C. ulcerans</i>
<i>C. flavescens</i>	<i>C. ovis</i>	<i>C. urealyticum</i>
<i>C. glucuronolyticum</i>	<i>C. parvum</i>	<i>C. xerosis</i>

Coxiella – Causes Q-fever. Cattle, sheep and goats are primary carriers. Organisms are excreted in milk, urine, feces, placenta or amniotic fluid of infected animals. Humans breath in dust contaminated particles and become infected causing high fever, headache, confusion, sore throat, sweats, nausea, chest pain, etc.

Coxiella burnetii

Cronobacter -considered a neonatal bacteria, perhaps from contaminated formula.

<i>C. sakazakii</i>	<i>C. turicensis</i>	<i>C. dublinensis</i>
<i>C. malonaticus</i>	<i>C. muytjensii</i>	

Curtobacterium –causes disease in a variety of plants

<i>C. albidum</i>	<i>C. herbarum</i>	<i>C. pusillum</i>
<i>C. citreum</i>	<i>C. luteum</i>	<i>C. albidum</i>
<i>C. flaccumfaciens</i>	<i>C. plantarum</i>	

Cytophaga -known to cause disease in fish, namely trout and salmon.

<i>C. columnaris</i>	<i>C. johnsonae</i>
<i>C. hutchinsonii</i>	<i>C. psychrophila</i>

Denitrobacterium -found in the rumen of bovine.

D. detoxificans

Dichelobacter -the causative agent of ovine foot rot.

D. nodosus

Edwardsiella -found in aquatic animals and reptiles and is found in the intestinal tract of snakes and seals. It is occasionally isolated from the urine, blood, and feces of humans and has been known to cause gastroenteritis and wound infections.

<i>E. hoshinae</i>	<i>E. ictaluri</i>	<i>E. tarda</i>
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Eggerthella - found in the human colon and feces and have been implicated as a cause of ulcerative colitis, liver and anal abscesses and systemic bacteremia

<i>Eggerthella hongkongensis</i>	<i>Eggerthella lenta</i>	<i>Eggerthella sinensis</i>
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Ehrlichia -transmitted by ticks, causes anemia, bruising of gums, fever, lethargy and hemorrhaging in dogs and cats.

<i>E. canis</i>	<i>E. chaffeensis</i>	<i>E. ewingii</i>
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Eikenella -a bacteria naturally found in the human mouth and respiratory tract but when out of its natural location can cause infection.

Eikenella corrodens

Elizabethkingia -found in water, soil and microflora of fish and frogs, known to cause meningitis.
Elizabethkingia meningoseptica

Enterobacter -often found in hospitalized patients and in those who are on mechanical ventilation. The urinary and respiratory tract are the most common sites of infection. It is also a fecal coliform, along with Escherichia.

E. aerogenes	E. cowanii	E. ludwigii
E. amnigenus	E. dissolvens	E. nimipressuralis
E. agglomerans	E. gergoviae	E. pyrinus
E. asburiae	E. hormaechei	E. sakazakii
E. cancerogenus	E. intermedius	
E. cloacae	E. kobei	

Enterococcus -known to cause urinary tract infections, bacteremia, bacterial endocarditis, diverticulitis, and meningitis

E. avium	E. faecalis	E. solitarius
E. durans	E. faecium	

Erwinia -causes diseases in plants.

E. amylovora	E. mallotivora	E. rhapontici
E. aphidicola	E. papayae	E. toletana
E. billingiae	E. persicina	E. tracheiphila
E. chrysanthemi	E. psidii	
E. dacicola	E. pyrifoliae	

Erysipelothrix -infects many animals, found primarily in butchers, it is an animal pathogen causing erysipathiae, a skin infection
Erysipelothrix rhusiopathiae

Escherichia -commonly found in lower intestine of warm blooded organisms. Causes food poisoning (fecal contamination), as well as a wide-range of other pathogenic states. Causes Colibacillosis in dogs, cats, cows, pigs, etc.

E. albertii	E. coli	E. hermannii
E. blattae	E. fergusonii	E. vulneris

Ewingella -Respiratory tract infections following intensive care units has been observed in several instances. Vascular bypass surgery is a reported risk factor.
Ewingella americana

Falcivibrio -found in the human genital track.

F. grandis	F. vaginalis
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Flavobacterium -found in soil and water, known to cause disease in freshwater fish.

F. aquatile	F. flevene	F. pectinovorum
F. aureus	F. gondwanense	F. psychrophilum
F. balustinum	F. hydatis	F. saccharophilum
F. branchiophilum	F. johnsoniae	F. salegens
F. breve	F. multivorum	F. scophthalmum
F. columnare	F. okeanoikoites	F. succinans

Flexibacter -known to cause disease in fish, namely catfish.

F. aggregans	F. flexilis	F. ruber
F. columnaris	F. japonensis	F. sancti
F. echinica	F. litoralis	F. cf. sancti
F. elegans	F. polymorphus	F. tractuosus
F. filiformis	F. roseolus	

Francisella -F. tularensis, causes the disease tularemia or rabbit fever. F. novicida and F. philomiragia (previously Yersinia philomiragia) are associated with septicemia and invasive systemic infections

F. hispaniensis	F. noatunensis	F. piscicida
F. novicida	F. philomiragia	F. tularensis

Fusobacterium -contribute to periodontal diseases, Lemierre's syndrome, and topical skin ulcers.

F. necrophorum	F. nucleatum
F. novum	F. polymorphum

Gardnerella -can cause bacterial vaginosis in some women as a result of a disruption in the normal vaginal microflora.

G. vaginalis

Gemella - primarily found in the mucous membranes of humans and other animals, particularly in the oral cavity and upper digestive tract.

G. bergeri	G. haemolysans	G. palaticanis
G. cuniculi	G. morbillorum	G. sanguinis

Haemophilus -a cause of sepsis and bacterial meningitis in young children.

H. aegyptius	H. felis	H. paracuniculus
H. aphrophilus	H. haemolyticus	H. parahaemolyticus
H. avium	H. influenzae	H. pittmaniae
H. ducreyi	H. parainfluenzae	H. somnus

Hafnia –normally found in the human gastrointestinal tract.
H. alvei

Helicobacter -can inhabit various areas of the stomach, particularly the antrum. It causes a chronic low-level inflammation of the stomach lining and is strongly linked to the development of duodenal and gastric ulcers and stomach cancer. Known to cause same in dogs, cats and ferrets.

H. acinonychis	H. cynogastricus	H. pullorum
H. anseris	H. felis	H. pylori
H. aurati	H. fennelliae	H. rappini
H. bilis	H. ganmani	H. rodentium
H. bizzozeronii	H. hepaticus	H. salomonis
H. brantae	H. mesocricetorum	H. trogontum
H. canadensis	H. marmotae	H. typhlonius
H. canis	H. muridarum	H. winghamensis
H. cholecystus	H. mustelae	
H. cinaedi	H. pametensis	

Jeotgalicoccus -so far only found in sauces made from seafood.

J. halotolerans	J. pinnipedalis Hoyles
J. marinus	J. psychrophilus Yoon

Kingella -naturally a part of bacteria in the throat, out of place can cause septic arthritis, osteomyelitis, spondylodiscitis, bacteraemia, and endocarditis, and less frequently lower respiratory tract infections and meningitis.

Kingella kingae

Klebsiella -can lead to a wide range of disease states, notably pneumonia, urinary tract infections, septicemia, ankylosing spondylitis, and soft tissue infections.

K. granulomatis	K. planticola	K. singaporensis
K. oxytoca	K. pneumoniae	K. variicola

Lactobacillus -they are present in the vagina and the gastrointestinal tract, where they are symbiotic and make up a small portion of the gut flora.

L. acetotolerans	L. delbrueckii delbrueckii	L. johnsonii	L. perolens
L. acidifarinae	L. delbrueckii bulgaricus	L. kalixensis	L. plantarum
L. acidipiscis	L. delbrueckii lactis	L. kefiranoferens	L. pontis
L. acidophilus	L. dextrinicus	L. kefiri	L. psittaci
L. agilis	L. diolivorans	L. kimchii	L. rennini
L. algidus	L. equi	L. kitasatonis	L. reuteri
L. alimentarius	L. equigenerosi	L. kunkeei	L. rhamnosus
L. amylolyticus	L. farraginis	L. leichmannii	L. rimae
L. amylophilus	L. farciminis	L. lindneri	L. rogosae
L. amylotrophicus	L. fermentum	L. malefermentans	L. rossiae
L. amylovorus	L. formicis	L. mali	L. ruminis
L. animalis	L. fructivorans	L. manihotivorans	L. saerimneri
L. antri	L. frumenti	L. mindensis	L. sakei
L. apodemi	L. fuchuensis	L. mucosae	L. salivarius
L. aviarius	L. gallinarum	L. murinus	L. sanfranciscensis
L. bifermentans	L. gasseri	L. nagelii	L. satsumensis
L. brevis	L. gastricus	L. namurensis	L. secaliphilus
L. buchneri	L. ghanensis	L. nantensis	L. sharpeae
L. camelliae	L. graminis	L. oligofermentans	L. siliginis
L. casei	L. hammesii	L. oris	L. spicheri
L. cateniformis	L. hamsteri	L. panis	L. suebicus
L. ceti	L. harbinensis	L. pantheris	L. thailandensis
L. coleohominis	L. hayakitensis	L. parabrevis	L. ultunensis
L. collinoides	L. helveticus	L. parabuchneri	L. vaccinostercus
L. composti	L. hilgardii	L. paracollinoides	L. vaginalis
L. concavus	L. homohiochii	L. parafarraginis	L. versmoldensis
L. coryniformis	L. iners	L. parakefiri	L. vini
L. crispatus	L. ingluviei	L. paralimentarius	L. vitulinus
L. crustorum	L. intestinalis	L. paraplantarum	L. zeae
L. curvatus	L. jensenii	L. pentosus	L. zymae

Lactococcus -often used in dairy fermentation, like making of cheese and buttermilk.

L. garvieae	L. plantarum	L. lactis hordniae
L. lactis	L. raffinolactis	L. lactis lactis
L. piscium	L. lactis cremoris	L. lactis lactis diacetylactis

Legionella -live within amoebae in the natural environment. Legionella species are the causative agent of the human Legionnaires' disease and the lesser form, Pontiac fever. Legionella transmission is via aerosols — the inhalation of mist droplets containing the bacteria

L. adelaidensis	L. gratiana	L. pneumophila
L. anisa	L. gresilensis	L. quateirensis
L. beliardensis	L. hackeliae	L. quinlivanii
L. birminghamensis	L. impletisoli	L. rowbothamii
L. bozemanii	L. israelensis	L. rubrilucens
L. brunensis	L. jamestowniensis	L. sainthelensi
L. busanensis	L. jeonii'	L. santicrucis
L. cherrii	L. jordanis	L. shakespearei
L. cincinnatiensis	L. lansingensis	L. spiritensis
L. donaldsonii	L. londiniensis	L. steigerwaltii
L. drancourtii	L. longbeachae	L. taurinensis
L. drozanskii	L. lytica	L. tucsonensis
L. erythra	L. maceachernii	L. wadsworthii
L. fairfieldensis	L. micdadei	L. waltersii
L. fallonii	L. moravica	L. worsleiensis
L. feeleii	L. nautarum	L. yabuuchiae
L. geestiana	L. oakridgensis	
L. genomospecies 1	L. parisiensis	

Leifsonia –causes a stunting disease in sugarcane plants.
Leifsonia.xyli xyli

Leptospira -affects humans and a wide range of animals, including mammals, birds, amphibians, and reptiles. Described as "acute infectious disease with enlargement of spleen, jaundice and nephritis."

L. alexanderi	L. genomospecies 4	L. meyeri
L. biflexa	L. genomospecies 5	L. noguchii
L. borgpetersenii	L. inadai	L. santarosai
L. broomii	L. interrogans	L. weilii
L. fainei	L. kirschneri	L. wolbachii
L. genomospecies 1	L. kmetyi	L. wolffii
L. genomospecies 3	L. licerasiae	

Leuconostoc -responsible for fermentation, causes the smell of sourdough starter.

L. carnosum	L. fructosum	L. kimchii
L. citreum	L. garlicum	L. lactis
L. durionis	L. gasicomitatum	L. mesenteroides
L. fallax	L. gelidum	L. pseudoficulneum
L. ficulneum	L. inhae	L. pseudomesenteroides

Listeria - commonly found in soil, stream water, sewage, plants, and food. Listeria are known to be the bacteria responsible for listeriosis, a rare but potentially lethal food-borne infection.

L. grayi	L. monocytogenes	L. welshimeri
L. innocua	L. seeligeri	
L. ivanovii	L. murrayi	

Macrocooccus –found in water, dust and soil, said not to harm humans.

M. bovicus	M. caseolyticus	M. lamae
M. brunensis	M. equipercicus	
M. carouselicus	M. hajekii	

Methylobacteria -often water bourne like water from dental units, and blood bank purification units

M. adhaesivum	M. isbiliense	M. populi
M. aminovorans	M. jeotgali	M. radiotolerans
M. aquaticum	M. lusitanum	M. rhodesianum
M. chloromethanicum	M. mesophilicum	M. rhodinum
M. dichloromethanicum	M. nodulans	M. suomiense
M. extorquens	M. organophilum	M. thiocyanatum
M. fujisawaense	M. oryzae	M. variabile
M. hispanicum	M. podarium	M. zatmanii

Microbacterium - are known to live in milk, cheese, beef, eggs...on catheters, in bone marrow, in your hair and in hair products.

M. aerolatum	M. hatanonis	M. oleivorans
M. aoyamense	M. hominis	M. oxydans
M. aquimaris	M. hydrocarbonoxydans	M. paludicola
M. arabinogalactanolyticum	M. imperiale	M. paraoxydans
M. arborescens	M. indicum	M. phyllosphaerae
M. aurantiacum	M. insulae	M. profundus
M. aurum	M. invictum	M. pumilum
M. awajiense	M. keratanolyticum	M. pygmaeum
M. barkeri	M. ketosireducens	M. resistens
M. binotii	M. kitamiense	M. saperdae
M. chokolatum	M. koreense	M. schleiferi
M. deminutum	M. kribbense	M. sediminicola
M. esteraromaticum	M. lacticum	M. terrae
M. flavescens	M. lacus	M. terregens
M. flavum	M. laevaniformans	M. terricola
M. fluvii	M. liquefaciens	M. testaceum
M. foliorum	M. luteolum	M. thalassium
M. ginsengisoli	M. luticocci'	M. trichothecenolyticum
M. gubbeenense	M. marinilacus	M. ulmi
M. halophilum	M. maritropicum	M. xylanilyticum
M. halotolerans	M. natoriense	

Micrococcus -found in soil, dust, water, air, part of the normal flora of the mammalian skin, colonizes the human mouth, mucosa, oropharynx and respiratory tract.

M. antarcticus	M. luteus	M. mucilaginosus
M. flavus	M. lysae	M. roseus

Micromonospora –found in soil and water, many aminoglycoside antibiotics are made with it, see italics.

M. aurantiaca	M. fulviviridis	M. olivasterospora
M. carbonacea	M. gallica	M. pallida
M. chalcea	M. halophytica	M. peucetia
M. chersina	M. inositol - <i>produces the antibiotic sisomicin</i>	M. purpureochromogenes - <i>produces the antibiotic gentamicin</i>
M. citrea	M. inyonensis - <i>produces the antibiotics mutamicin and netilmicin</i>	M. rosaria
M. coerulea	M. nigra	M. sagamiensis
M. echinaurantiaca		M. viridifaciens
M. echinofusca		
M. echinospora - <i>produces highly toxic DNA splicing calicheamicins</i>		

Moraxella -cause respiratory issues, conjunctivitis, corneal disease in bovine.

M. atlantae	M. catarrhalis	M. lincolnii
M. boevrei	M. caviae	M. nonliquefaciens
M. bovis	M. cuniculi	M. oblonga
M. canis	M. equi	M. osloensis
M. caprae	M. lacunata	M. saccharolytica

Mycobacterium -tuberculosis complex (MTBC) are the causative agents of human and animal tuberculosis: *M. africanum*, *M. bovis*, *M. canetti*, *M. caprae*, *M. microti*, *M. pinnipedii*, *M. tuberculosis*, the major cause of human tuberculosis. *M. avium* paratuberculosis has been implicated in Crohn's disease in humans and Johne's disease in cattle and sheep. *M. ulcerans* causes the "Buruli", or "Bairnsdale ulcer" in the skin. *M. leprae* causes leprosy.

<i>M. abscessus</i>	<i>M. farcinogenes</i>	<i>M. nebraskense</i>
<i>M. africanum</i>	<i>M. flavescens</i>	<i>M. neoaurum</i>
<i>M. africanum</i>	<i>M. florentinum</i>	<i>M. neworleansense</i>
<i>M. agri</i>	<i>M. fluoroanthenvivans</i>	<i>M. nonchromogenicum</i>
<i>M. aichiense</i>	<i>M. fortuitum</i>	<i>M. novocastrense</i>
<i>M. alvei</i>	<i>M. fortuitum acetamidolyticum</i>	<i>M. obuense</i>
<i>M. arosiense</i>	<i>M. frederiksbergense</i>	<i>M. palustre</i>
<i>M. arupense</i>	<i>M. gadium</i>	<i>M. parafortuitum</i>
<i>M. asiaticum</i>	<i>M. gastri</i>	<i>M. parascrofulaceum</i>
<i>M. aubagnense</i>	<i>M. genavense</i>	<i>M. parmense</i>
<i>M. aurum</i>	<i>M. gilvum</i>	<i>M. peregrinum</i>
<i>M. austroafricanum</i>	<i>M. goodii</i>	<i>M. phlei</i>
<i>M. avium</i>	<i>M. gordoniae</i>	<i>M. phocaicum</i>
<i>M. avium hominissuis</i>	<i>M. haemophilum</i>	<i>M. pinnipedii</i>
<i>M. avium paratuberculosis</i>	<i>M. hassiacum</i>	<i>M. porcinum</i>
<i>M. avium silvaticum</i>	<i>M. heckeshornense</i>	<i>M. poriferae</i>
<i>M. boenickei</i>	<i>M. heidelbergense</i>	<i>M. pseudoshottsii</i>
<i>M. bohemicum</i>	<i>M. hiberniae</i>	<i>M. psychrotolerans</i>
<i>M. bolletii</i>	<i>M. hodleri</i>	<i>M. pulveris</i>
<i>M. botniense</i>	<i>M. holsaticum</i>	<i>M. pyrenivivans</i>
<i>M. bovis</i>	<i>M. houstonense</i>	<i>M. rhodesiae</i>
<i>M. branderi</i>	<i>M. immunogenum</i>	<i>M. saskatchewanense</i>
<i>M. brisbanense</i>	<i>M. interjectum</i>	<i>M. scrofulaceum</i>
<i>M. brumae</i>	<i>M. intermedium</i>	<i>M. senegalense</i>
<i>M. canariense</i>	<i>M. intracellulare</i>	<i>M. seoulense</i>
<i>M. canetti</i>	<i>M. kansasii</i>	<i>M. septicum</i>
<i>M. caprae</i>	<i>M. komossense</i>	<i>M. shimoidei</i>
<i>M. caprae</i>	<i>M. kubicae</i>	<i>M. shottsii</i>
<i>M. celatum</i>	<i>M. kumamotoense</i>	<i>M. simiae</i>
<i>M. chelonae</i>	<i>M. lacus</i>	<i>M. smegmatis</i>
<i>M. chimaera</i>	<i>M. lentiflavum</i>	<i>M. sphagni</i>
<i>M. chitae</i>	<i>M. leprae</i>	<i>M. szulgai</i>
<i>M. chlorophenicum</i>	<i>M. lepraemurium</i>	<i>M. terrae</i>
<i>M. chubuense</i>	<i>M. lepromatosis</i>	<i>M. thermoresistibile</i>
<i>M. colombiense</i>	<i>M. madagascariense</i>	<i>M. tokaiense</i>
<i>M. conceptionense</i>	<i>M. mageritense</i>	<i>M. triplex</i>
<i>M. confluentis</i>	<i>M. malmoense</i>	<i>M. triviale</i>
<i>M. conspicuum</i>	<i>M. marinum</i>	<i>M. tuberculosis</i>
<i>M. cookii</i>	<i>M. massiliense</i>	<i>M. tusciae</i>
<i>M. cosmeticum</i>	<i>M. microti</i>	<i>M. ulcerans</i>
<i>M. diernhoferi</i>	<i>M. monacense</i>	<i>M. vaccae</i>
<i>M. doricum</i>	<i>M. montefiorensis</i>	<i>M. vanbaalenii</i>
<i>M. duvalii</i>	<i>M. morioakaense</i>	<i>M. wolinskyi</i>
<i>M. elephantis</i>	<i>M. mucogenicum</i>	<i>M. xenopi</i>
<i>M. fallax</i>	<i>M. murale</i>	

Mycoplasma –known as the bacterial parasite, known to cause pneumonia, pelvic inflammations, etc.

<i>M. alvi</i>	<i>M. gallisepticum</i>	<i>M. muris</i>
<i>M. amphiforme</i>	<i>M. genitalium</i>	<i>M. ovipneumoniae</i>
<i>M. bovis</i>	<i>M. hominis</i>	<i>M. pneumoniae</i>
<i>M. fastidiosum</i>	<i>M. hyopneumoniae</i>	<i>M. pulmonia</i>
<i>M. fermentans</i>	<i>M. laboratorium</i>	

Neisseria -bacteria that colonize the mucosal surfaces of many animals and humans. Only *N. meningitidis* and *N. gonorrhoeae* are noted to cause infection.

<i>N. bacilliformis</i>	<i>N. flavescens</i>	<i>N. mucosa</i>
<i>N. cinerea</i>	<i>N. gonorrhoeae</i>	<i>N. pharyngis</i>
<i>N. cuniculi</i>	<i>N. lactamica</i>	<i>N. polysaccharea</i>
<i>N. denitrificans</i>	<i>N. macacae</i>	<i>N. sicca</i>
<i>N. elongata</i>	<i>N. meningitidis</i>	<i>N. subflava</i>

Neorickettsia -live within monocytes and macrophages of dogs, horses, bats, and humans.

Neorickettsia sennetsu

Nocardia -Nocardia are found worldwide in soil that is rich with organic matter. Nocardia are oral microflora found in healthy gingiva as well as periodontal pockets. Most Nocardia infections are acquired by inhalation of the bacteria or through traumatic introduction known to cause pulmonary or systemic infections.

<i>N. aerocolonigenes</i>	<i>N. cerradoensis</i>	<i>N. otitidis-cavarium</i>
<i>N. africana</i>	<i>N. corallina</i>	<i>N. paucivivans</i>
<i>N. argentinensis</i>	<i>N. cyriaci-georgica</i>	<i>N. pseudobrasiliensis</i>
<i>N. asteroides</i>	<i>N. dassonvillei</i>	<i>N. rubra</i>
<i>N. blackwellii</i>	<i>N. elegans</i>	<i>N. transvelencensis</i>
<i>N. brasiliensis</i>	<i>N. farcinica</i>	<i>N. uniformis</i>
<i>N. brevicatena</i>	<i>N. nigritans</i>	<i>N. vaccinii</i>
<i>N. carneae</i>	<i>N. nova</i>	<i>N. veterana</i>
<i>N. caviae</i>	<i>N. opaca</i>	

Nosocomiicoccus -said not to harm humans, but has been found isolated in hospitals.
Nosocomiicoccus ampullae

Paenibacillus -found in many environments, can actually help regulate toxicity from other pathogens (supposed to be the good guys).

P. agarexedens	P. durum	P. mendelii
P. agaridevorans	P. ehimensis	P. motobuensis
P. alginolyticus	P. elgii	P. naphthalenovorans
P. alkaliterrae	P. favisporus	P. nematophilus
P. alvei	P. glucanolyticus	P. odorifer
P. amylolyticus	P. glycanilyticus	P. pabuli
P. anaericanus	P. gordonae	P. peoriae
P. antarcticus	P. graminis	P. phyllosphaerae
P. assamensis	P. granivorans	P. polymyxa
P. azoreducens	P. hodogayensis	P. popilliae
P. azotofixans	P. illinoisensis	P. pulvifaciens
P. barcinonensis	P. jamilae	P. rhizosphaerae
P. borealis	P. kobensis	P. sanguinis
P. brasiliensis	P. koleovorans	P. stellifer
P. campinasensis	P. koreensis	P. terrae
P. chinjuensis	P. kribbensis	P. thiaminolyticus
P. chitinolyticus	P. lactis	P. timonensis
P. chondroitinus	P. larvae	P. turicensis
P. cineris	P. lautus	P. validus
P. cookii	P. lentimorbus	P. vortex
P. curdolanolyticus	P. macerans	P. wynnii
P. daejeonensis	P. macquariensis	P. xylanilyticus
P. dendritiformis	P. massiliensis	

Pantoea -causing wound, blood, and urinary tract infections. It is commonly isolated from plant surfaces, seeds, fruit and animal or human feces.

P. agglomerans	P. dispersa	P. terrea
P. ananatis	P. punctata	
P. citrea	P. stewartii -corn disease	

Pasteurella -zoonotic pathogens, humans can acquire an infection from domestic pet bites.

P. aerogenes	P. gallicida	P. pneumotropica
P. anatis	P. gallinarum	P. skyensis
P. avium	P. granulomatis	P. stomatis
P. bettyae	P. langaaensis	P. testudinis
P. caballi	P. lymphangitidis	P. trehalosi
P. canis	P. mairii	P. ureae
P. dagmatis	P. multocida	P. volantium

Pediococcus -responsible for fermentation, can help the body fight off harmful pathogens.

P. acidilactici	P. damnosus	P. parvulus
P. cellicola	P. ethanolidurans	P. pentosaceus
P. clausenii	P. inopinatus	P. stilesii

Peptostreptococcus -naturally found in humans, predominantly in the mouth, skin, gastrointestinal, urinary tracts, and compose a portion of the bacterial gut flora.

P. anaerobius	P. ivorii	P. octavius
P. asaccharolyticus	P. lacrimalis	P. prevotii
P. harei	P. lactolyticus	P. tetradius
P. hydrogenalis	P. magnus	P. vaginalis
P. indoliticus	P. micros	

Plesiomonas - tends to cause gasterenteritis. From freshwater, freshwater fish, and shellfish and from many types of animals.

P. shigelloides

Porphyromonas -is implicated in certain forms of periodontal disease, as well as the upper gastrointestinal tract, respiratory tract, and in the colon.

P. gingivalis

Prevotella -members of oral and vaginal flora, cause infection when out of their environment.

P. melaninogenica P. intermedia

Propionibacterium -found in dairy products or in the intestinal tracts of animals and living in the pores of humans, often pathogenic after surgeries.

Propionibacterium.acnes

Proteus -occurs naturally in the intestines of humans and a wide variety of animals; also manure, soil and polluted waters. Tends to cause UTIs and wound infections.

P. hauseri	P. myxofaciens	P. vulgaris
P. mirabilis	P. penneri	

Providencia -cause urinary tract infections, particularly in patients with long-term indwelling urinary catheters or extensive severe burns

P. stuartii	P. rustigianii	P. alcalifaciens
P. sneebia	P. heimbachae	
P. rettgeri	P. burhodogranariae	

Pseudomonas -flourishes in hospital environments, and is a particular problem in this environment since it is the second most common infection in hospitalized patients (nosocomial infections). Many species are plant pathogens.

P. abietaniphila	P. corrugata	P. mediterranea	P. resiniphila
P. acidophila	P. constantinii	P. meliae	P. resinovorans
P. aeruginosa	P. cremoricolorata	P. mendocina	P. rhizosphaerae
P. agarici	P. cruciviae	P. meridiana	P. rhodesiae
P. alcaligenes	P. delhiensis	P. migulae	P. rubescens
P. alcaliphila	P. denitrificans	P. monteilii	P. salomonii
P. alkanolytica	P. excubis	P. moraviensis	P. savastanoi
P. amygdali	P. extremorientalis	P. mosselii	P. segitis
P. amylderamosa	P. ficuserectae	P. mucidolens	P. septica
P. anguilliseptica	P. flavescens	P. nitroreducens	P. simiae
P. antarctica	P. fluorescens	P. oleovorans	P. straminea
P. argentinensis	P. fragi	P. orientalis	P. stutzeri
P. asplenii	P. frederiksbergensis	P. oryzihabitans	P. suis
P. aurantiaca	P. fulva	P. otitidis	P. synxantha
P. aureofaciens	P. fuscovaginae	P. pachastrellae	P. syringae
P. avellanae	P. gelidicola	P. palleroniana	P. taetrolens
P. azotifigens	P. gessardii	P. panacis	P. thermotolerans
P. azotoformans	P. grimontii	P. papaveris	P. thivervalensis
P. balearica	P. helianthi'	P. parafulva	P. tolaasii
'P. blatchfordae'	P. indica	P. peli	P. tomato'
P. borbori	P. jessenii	P. perolens	P. tremae
P. brassicacearum	P. jinjuensis	P. pertucinogena	P. trivialis
P. brenneri	P. kilonensis	P. plecoglossicida	P. turbinellae
P. cannabina	P. knackmussii	P. poae	P. tuticorinensis
P. caricapapayae	P. koreensis	P. pohangensis	P. umsongensis
P. cedrina	P. libanensis	P. proteolytica	P. vancouverensis
P. chlororaphis	P. lini	P. pseudoalcaligenes	P. veronii
P. cichorii	P. lundensis	P. psychrophila	P. viridiflava
P. citronnellolis	P. lutea	P. psychrotolerans	P. vranovensis
P. coenobios	P. luteola	P. putida	P. xanthomarina
P. congelans	P. mandelii	P. rathonis	
P. coronafaciens	P. marginalis	P. reptilivora	

Raoultella -thrive in animal mucosa.

R. ornitholytica	R. planticola	R. terrigena
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Rathayibacter -cause blight in wheat.

R. caricis	R. iranicus	R. toxicus
R. festucae	R. rathayi	R. tritici

Rhodococcus -thrive in a broad range of environments, including soil, water, and eukaryotic cells. Two pathogenic species: R. fascians, a plant pathogen that causes leafy gall disease. R. equi is the causative agent of foal pneumonia. It has a wide host range sporadically infecting pigs, cattle and (immunocompromised) humans.

R. aurantiacus	R. koreensis	R. rhodnii
R. baikonurensis	R. kroppenstedtii Mayilraj	R. rhodochrous
R. boritolerans	R. maanshanensis	R. ruber
R. corynebacterioides	R. marinonascens	R. triatomae
R. equi	R. opacus	R. tukisamuensis
R. erythropolis	R. percolatus	R. wratislaviensis
R. fascians	R. phenolicus	R. yunnanensis
R. globerulus	R. polyvorum	R. zopfii Stoecker
R. gordoniae	R. pyridinivorans	
R. jostii	R. RHA1	

Rickettsia -carried by many ticks, fleas, and lice, and cause diseases in humans such as typhus, rickettsialpox, Boutonneuse fever, African tick bite fever, Rocky Mountain spotted fever, Flinders Island spotted fever and Queensland tick typhus.

R. africae	R. felis	R. sibirica
R. akari	R. japonica	R. typhi
R. australis	R. prowazekii	
R. conorii	R. rickettsii	

Salmonella -found worldwide in cold and warm-blooded animals (including humans), and in the environment. They cause illnesses like typhoid fever, paratyphoid fever, and the foodborne illness.

S. bongori	S. enterica diarizonae	S. enterica indica
S. enterica	S. enterica enterica	S. enterica salamae
S. enterica arizonae	S. enterica houtenae	S. typhi

Salinicoccus -isolated in some asian food dishes but little is known about this genera...it is a "coccus" so I included it.

S. albus	S. iranensis	S. marinus
S. alkaliphilus	S. jeotgali	S. roseus
S. carmicancri	S. kekensis	S. salitudinis
S. halodurans	S. kunmingensis	S. salsiraiae
S. hispanicus	S. luteus	S. siamensis

Sarcina - found on the surface of cereal seeds, in soil, mud, and in the stomachs of humans, rabbits, and guinea pigs.

<i>S. adriatica</i>	<i>S. incana</i>	<i>S. pulchra</i>
<i>S. agilis</i>	<i>S. incarnata</i>	<i>S. pulmonum</i>
<i>S. alba</i>	<i>S. intermedia</i>	<i>S. purpurascens</i>
<i>S. alutacea</i>	<i>S. lactea</i>	<i>S. radiata</i>
<i>S. aurantiaca</i>	<i>S. liquefaciens</i>	<i>S. renis</i>
<i>S. aurea</i>	<i>S. litoralis</i>	<i>S. rosacea</i>
<i>S. aurescens</i>	<i>S. livida</i>	<i>S. rosea</i>
<i>S. barkeri</i>	<i>S. lutea</i>	<i>S. rubra</i>
<i>S. bicolor</i>	<i>S. luteola</i>	<i>S. solani</i>
<i>S. candida</i>	<i>S. marginata</i>	<i>S. striata</i>
<i>S. camea</i>	<i>S. maxima</i>	<i>S. subflava</i>
<i>S. cellaris</i>	<i>S. meliflava</i>	<i>S. sulfurea</i>
<i>S. cerevisiae</i>	<i>S. methanica</i>	<i>S. sulphurata</i>
<i>S. citrea</i>	<i>S. minuta</i>	<i>S. symbiotica</i>
<i>S. citrina</i>	<i>S. mirabilis</i>	<i>S. tetragena</i>
<i>S. devorans</i>	<i>S. mobilis</i>	<i>S. thermophila</i>
<i>S. equi</i>	<i>S. morrhuae</i>	<i>S. ureae</i>
<i>S. erythromyxa</i>	<i>S. mucosa</i>	<i>S. urinae</i>
<i>S. fusca</i>	<i>S. nivea</i>	<i>S. velutina</i>
<i>S. gasoformans</i>	<i>S. noctiluca</i>	<i>S. ventriculi</i>
<i>S. gigantea</i>	<i>S. paludosa</i>	<i>S. vesicae</i>
<i>S. hansenii</i>	<i>S. parvulus</i>	
<i>S. hyalina</i>	<i>S. pelagia</i>	

Serratia -generally acquired in a hospital or health care facility.

<i>S. entomophila</i>	<i>S. liquefaciens</i>	<i>S. proteamaculans</i>
<i>S. ficaria</i>	<i>S. marcescens</i>	<i>S. quinivorans</i>
<i>S. fonticola</i>	<i>S. odorifera</i>	<i>S. rubidaea</i>
<i>S. grimesii</i>	<i>S. plymuthica</i>	

Shigella -It is only naturally found in humans and apes. During infection, it typically causes dysentery.

<i>S. boydii</i>	<i>S. flexneri</i>
<i>S. dysenteriae</i>	<i>S. sonnei</i>

Spirillum -passed from rodent to human via the rodent's urine or mucous secretions.

Spirillum volutans

Spiroplasma -live on plants or intestine of insects, cause cataracts and neurological damage in suckling mice, citrus and corn plant disease, mad-cow-disease.

<i>S. citri</i>	<i>S. kunkelii</i>	<i>S. mirum</i>
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Staphylococcus -Most are harmless and reside normally on the skin and mucous membranes of humans and other organisms. Found worldwide, they are a small component of soil microbial flora.

<i>S. arlettae</i>	<i>S. felis</i>	<i>S. pulvereri</i>
<i>S. aureus</i>	<i>S. fleurettii</i>	<i>S. rostri</i>
<i>S. aureus. anaerobius</i>	<i>S. gallinarum</i>	<i>S. saccharolyticus</i>
<i>S. aureus. aureus</i>	<i>S. haemolyticus</i>	<i>S. saprophyticus</i>
<i>S. auricularis</i>	<i>S. hominis</i>	<i>S. saprophyticus. bovis</i>
<i>S. capitis</i>	<i>S. hominis. hominis</i>	<i>S. saprophyticus. saprophyticus</i>
<i>S. capitis. capitis</i>	<i>S. hominis. novobiosepticus</i>	<i>S. schleiferi</i>
<i>S. capitis. urealyticus</i>	<i>S. hyicus</i>	<i>S. schleiferi. coagulans</i>
<i>S. caprae</i>	<i>S. intermedius</i>	<i>S. schleiferi. schleiferi</i>
<i>S. carnosus</i>	<i>S. kloosii</i>	<i>S. sciuri</i>
<i>S. carnosus. carnosus</i>	<i>S. leei</i>	<i>S. sciuri. carnaticus</i>
<i>S. carnosus. utilis</i>	<i>S. lentus</i>	<i>S. sciuri. rodentium</i>
<i>S. chromogenes</i>	<i>S. lugdunensis</i>	<i>S. sciuri. sciuri</i>
<i>S. cohnii</i>	<i>S. lutrae</i>	<i>S. simiae</i>
<i>S. cohnii. cohnii</i>	<i>S. lyticans</i>	<i>S. simulans</i>
<i>S. cohnii. urealyticus</i>	<i>S. massiliensis</i>	<i>S. stepanovicii</i>
<i>S. condimenti</i>	<i>S. microti</i>	<i>S. succinus</i>
<i>S. croceolyticus</i>	<i>S. muscae</i>	<i>S. succinus. casei</i>
<i>S. delphini</i>	<i>S. nepalensis</i>	<i>S. succinus. succinus</i>
<i>S. devriesei</i>	<i>S. pasteurii</i>	<i>S. vitulinus</i>
<i>S. epidermidis</i>	<i>S. pettenkoferi</i>	<i>S. warneri</i>
<i>S. equorum</i>	<i>S. piscifermentans</i>	<i>S. xylosum</i>
<i>S. equorum. equorum</i>	<i>S. pseudintermedius</i>	
<i>S. equorum. linens</i>	<i>S. pseudolugdunensis</i>	

Streptococcus -known to cause strep throat, infection in most any part of the body. *S. salivarius thermophilus* is used in manufacture of cheese and yogurt.

<i>S. agalactiae</i>	<i>S. intermedius</i>	<i>S. salivarius</i>
<i>S. anginosus</i>	<i>S. mitis</i>	<i>S. salivarius thermophilus</i>
<i>S. bovis</i>	<i>S. mutans</i>	<i>S. sanguinis</i>
<i>S. canis</i>	<i>S. oralis</i>	<i>S. sobrinus</i>
<i>S. constellatus</i>	<i>S. parasanguinis</i>	<i>S. suis</i>
<i>S. dysgalactiae</i>	<i>S. peroris</i>	<i>S. uberis</i>
<i>S. equi</i>	<i>S. pneumoniae</i>	<i>S. vestibularis</i>
<i>S. equinus</i>	<i>S. pyogenes</i>	<i>S. viridans</i>
<i>S. iniae</i>	<i>S. ratti</i>	<i>S. zooepidemicus</i>

Streptomyces -Found predominantly in soil and decaying vegetation, they produce over two-thirds of the clinically useful antibiotics of natural origin

<i>S. achromogenes</i>	<i>S. fimbriatus</i>	<i>S. platensis</i>
<i>S. alboniger</i>	<i>S. fradiae</i>	<i>S. pulveraceus</i>
<i>S. albus</i>	<i>S. fulvissimus</i>	<i>S. rimosus</i>
<i>S. ambofaciens</i>	<i>S. globisporus</i>	<i>S. roseosporus</i>
<i>S. aomiensis</i>	<i>S. griseoruber</i>	<i>S. samurensis</i>
<i>S. aureofaciens</i>	<i>S. griseoviridis</i>	<i>S. scabies</i>
<i>S. aureomonopodiales</i>	<i>S. griseus</i>	<i>S. somaliensis</i>
<i>S. avermitilis</i>	<i>S. hyderabadensis</i>	<i>S. stanford</i>
<i>S. avidinii</i>	<i>S. hygroscopicus</i>	<i>S. stramineus</i>
<i>S. bikiniensis</i>	<i>S. iysosuperficus</i>	<i>S. sudanensis</i>
<i>S. caespitosus</i>	<i>S. lactamdurans</i>	<i>S. tendae</i>
<i>S. cattleya</i>	<i>S. lavendulae</i>	<i>S. thermodiastaticus</i>
<i>S. caviscabies</i>	<i>S. lincolniensis</i>	<i>S. thermoviolaceus</i>
<i>S. chartreusis</i>	<i>S. lividans</i>	<i>S. toxytricini</i>
<i>S. chusanensis</i>	<i>S. lusitanus</i>	<i>S. tsukubaensis</i>
<i>S. clavuligerus</i>	<i>S. mediterranei</i>	<i>S. tubercidicus</i>
<i>S. coelicolor</i>	<i>S. niveus</i>	<i>S. venezuelae</i>
<i>S. diastaticus</i>	<i>S. nodosus</i>	<i>S. verticillus</i>
<i>S. exfoliatus</i>	<i>S. noursei</i>	<i>S. violaceoruber</i>
<i>S. faecalis</i>	<i>S. novocastria</i>	<i>S. violaceusniger</i>
<i>S. faecium</i>	<i>S. olivochromogenes</i>	<i>S. violochromogenes</i>
<i>S. felleus</i>	<i>S. orientalis'</i>	<i>S. viridochromogenes</i>
<i>S. ferralitis</i>	<i>S. peucetius</i>	
<i>S. filamentosus</i>	<i>S. phaeochromogenes'</i>	

Taylorella –see below

- T. equigenitalis*: causes the Contagious Equine Metritis in horses.
- T. asinigenitalis*: was isolated in the genital tract of donkeys and is obviously non-pathogenic.

Treponema -causes syphilis (*pallidum*) and a skin disease called pinta, bejel and yaws.

<i>T. carateum</i>	<i>T. pallidum</i>	<i>T. paraluisuniculi</i>
<i>T. denticola</i>	<i>T. pallidum pallidum</i>	

Ureaplasma -found in about 70% of sexually active humans, it is part of the normal genital flora in men and women.

- U. urealyticum*

Vibrio -associated with gastroenteritis but can also infect open wounds and cause septicemia. It can be carried by numerous sea-living animals, such as crabs or prawns, and has been known to cause fatal infections in humans. *Vibrio cholerae* is generally transmitted via contaminated water. Pathogenic *Vibrio* can cause foodborne infection, usually associated with eating undercooked seafood.

<i>V. adaptatus</i>	<i>V. gallicus</i>	<i>V. ordalii</i>
<i>V. aerogenes</i>	<i>V. gazogenes</i>	<i>V. orientalis</i>
<i>V. aestuarianus</i>	<i>V. gigantis</i>	<i>V. pacinii</i>
<i>V. agarivorans</i>	<i>V. haliotocoli</i>	<i>V. parahaemolyticus</i>
<i>V. albensis</i>	<i>V. harveyi</i>	<i>V. pectenicida</i>
<i>V. alginolyticus</i>	<i>V. hepatarius</i>	<i>V. penaeicida</i>
<i>V. anguillarum</i>	<i>V. hispanicus</i>	<i>V. pomeroyi</i>
<i>V. brasiliensis</i>	<i>V. hollisae</i>	<i>V. ponticus</i>
<i>V. bubulus</i>	<i>V. ichthyenteri</i>	<i>V. proteolyticus</i>
<i>V. calviensis</i>	<i>V. indicus</i>	<i>V. rotiferianus</i>
<i>V. campbellii</i>	<i>V. kanalaoe</i>	<i>V. ruber</i>
<i>V. chagasii</i>	<i>V. lentus</i>	<i>V. rumoiensis</i>
<i>V. cholerae</i>	<i>V. litoralis</i>	<i>V. salmonicida</i>
<i>V. cincinnatiensis</i>	<i>V. logei</i>	<i>V. scophthalmi</i>
<i>V. coralliilyticus</i>	<i>V. mediterranei</i>	<i>V. splendidus</i>
<i>V. crassostreae</i>	<i>V. metschnikovii</i>	<i>V. superstes</i>
<i>V. cyclitrophicus</i>	<i>V. mimicus</i>	<i>V. tapetes</i>
<i>V. diabolicus</i>	<i>V. mytili</i>	<i>V. tasmaniensis</i>
<i>V. diazotrophicus</i>	<i>V. natriegens</i>	<i>V. tubiashii</i>
<i>V. ezurae</i>	<i>V. navarrensis</i>	<i>V. vulnificus</i>
<i>V. fischeri</i>	<i>V. neonatus</i>	<i>V. wodanis</i>
<i>V. fluvialis</i>	<i>V. neptunius</i>	<i>V. xuii</i>
<i>V. fortis</i>	<i>V. nereis</i>	
<i>V. furnissii</i>	<i>V. nigripulchritudo</i>	

Xanthomonas - infect a wide variety of species including pepper, rice, citrus, cotton, tomato, and soybeans.

X. albilineans	X. cucurbitae	X. melonis
X. alfalfae	X. cyanopsidis	X. oryzae
X. ampelina	X. cynarae	X. papavericola
X. arboricola	X. euvesicatoria	X. perforans
X. axonopodis	X. fragariae	X. phaseoli
X. boreopolis	X. gardneri	X. pisi
X. badrii	X. holcicola	X. populi
X. bromi	X. hortorum	X. sacchari
X. campestris	X. hyacinthi	X. theicola
X. cassavae	X. malvacearum	X. translucens
X. citri	X. maltophilia	X. vasicola
X. codiae	X. manihotis	X. vesicatoria

Yersinia -the causative agent of the plague (black plague). Rodents are the natural reservoirs of Yersinia; less frequently other mammals serve as the host. Infection may occur either through blood (in the case of Y. pestis) or in an alimentary fashion, occasionally via consumption of food products (especially vegetables, milk-derived products and meat) contaminated with infected urine or feces. Thought to be implicated in Chron's disease, arthritis, respiratory issues, etc.

Y. aldovae	Y. frederiksenii	Y. pestis
Y. aleksiciae	Y. intermedia	Y. pseudotuberculosis
Y. bercovieri	Y. kristensenii	Y. rohdei
Y. enterocolitica	Y. mollaretii	Y. ruckeri

CYANOTOXINS are often implicated in what are commonly called red tides or harmful algal blooms. Lakes and oceans contain many single-celled organisms called phytoplankton. Under certain conditions, particularly when nutrient concentrations are high, these organisms reproduce exponentially. The resulting dense swarm of phytoplankton is called an algal bloom; these can cover hundreds of square kilometres and can be easily seen in satellite images. Individual phytoplankton rarely live more than a few days, but blooms can last weeks. Cyanotoxins are toxins produced by bacteria called cyanobacteria (also known as blue-green algae). Cyanobacteria are found almost everywhere, but particularly in lakes and in the ocean where, under certain conditions, they reproduce exponentially to form blooms. Blooming cyanobacteria can produce cyanotoxins in such concentrations that they poison and even kill animals and humans. Cyanotoxins can also accumulate in other animals such as fish and shellfish, and cause poisonings such as shellfish poisoning. Among cyanotoxins are some of the most powerful natural poisons known, including poisons which can cause rapid death by respiratory failure. Recreational exposure to cyanobacteria can result in gastro-intestinal and hayfever symptoms or pruritic skin rashes. Cyanotoxins include:

Microcystins - Once ingested, microcystin travels to the liver, via the bile acid transport system, where most is stored; though some remains in the blood stream and may contaminate tissue. Microcystin binds covalently to protein phosphatases thus disrupting cellular control processes.

Nodularins –can cause serious liver damage.

Anatoxin-a –causes nerve synapse conditions.

Anatoxin-a(S) - causes nerve synapse conditions.

Aplysiatoxins –causes skin conditions and are potent tumor promoters.

Cylindrospermopsins –toxic to the liver and kidneys, inhibits protein synthesis.

Lyngbyatoxin-a –toxic to the skin and gastrointestinal tract, inflammatory and tumor promoting.

Saxitoxins –known as PSP toxin (paralytic shellfish poisoning), a nerve toxin can cause paralysis.

Endotoxin - An "endotoxin" is a toxin that is a structural molecule of the bacteria that is recognized by the immune system. They are found in the outer membrane of various Gram-negative bacteria and are an important component of their ability to cause disease. Injection of a small amount of endotoxin in human volunteers has been shown to produce fever, a decrease in blood pressure, and activation of inflammation and coagulation. Endotoxins are in large part responsible for the dramatic clinical manifestations of infections with pathogenic Gram-negative bacteria, such as *Neisseria meningitidis*, the pathogens that causes meningococcal disease. In pharmaceutical production, it is necessary to remove all traces of endotoxin from drug product containers as even small amounts of endotoxin will cause illness in humans. *E. Coli*, Pertussis, Cholera and *Pseudomonas* are all gram negative bacteria known to produce endotoxins. Keep in mind that endotoxins can come from anyplace bacteria can get to, which means anywhere. All medications are possible sources, vaccines, even the containers that medications are placed into undergo a special decontamination procedure to assure they are free of endotoxins because it can be lethal combined with a medication. If this vial comes up you may want to track it not only back to bacteria to see which one might be involved but to the other DCA's like foods, vaccine, chemicals, etc.

Exotoxin - a toxin excreted by a microorganism, including bacteria, fungi, algae, and protozoa. An exotoxin can cause damage to the host by destroying cells or disrupting normal cellular metabolism. They are highly potent and can cause major damage to the host. Exotoxins may be secreted, or, similar to endotoxins, may be released during lysis (shedding during cell replication) of the cell. *Clostridium* (tetanus), Botulism, Athrax, *Lysteria*, Strep and Staph are all examples of bacteria that produce exotoxins.

Enterotoxin - a protein toxin released by a microorganism in the intestine. Enterotoxins are frequently cytotoxic and kill cells by altering the apical membrane permeability of the mucosal (epithelial) cells of the intestinal wall, causing the cell to die. Has a particularly marked effect upon the gastrointestinal tract, causing vomiting, diarrhoea, and abdominal pain. Organisms secreting enterotoxins: *Escherichia coli*, *Clostridium perfringens*, *Vibrio cholerae*, *Staphylococcus aureus*, *Yersinia enterocolitica*, *Shigella dysenteriae*.

Leukocidin –a substance (cytotoxin) produced by some pathogenic bacteria (particularly *Staphylococcus* and *Streptococcus*) that is toxic to polymorphonuclear leukocytes (neutrophils). Neutrophils are the good white blood cells that clean up all the infection and 'bad guys.'

Hepatotoxin - implies chemical-driven liver damage. It is not bacteria related per se, and although most hepatotoxins are chemical driven, they can be from microcystins, which are bacterial in nature .. so this vial was included here. The liver plays a central role in transforming and clearing chemicals and is susceptible to the toxicity from these agents. Certain medicinal agents, may injure the organ. Other chemical agents, such as those used in laboratories and industries and natural chemicals (e.g. microcystins) can also induce hepatotoxicity. Chemicals that cause liver injury are called hepatotoxins. More than 900 drugs have been implicated in causing liver injury and it is the most common reason for a drug to be withdrawn from the market. Drug induced liver injury is responsible for 5% of all hospital admissions and 50% of all acute liver failures. Many of these drugs are for diabetic, water retention, oral contraceptives, over the counter pain pills, etc.