

March 2019

Virus:

- Influenza
- Norovirus
- Rubeola (includes Measles)
- Varicella (Chicken Pox)
- Hepatitis A, B, C, D, E
- Human Immunodeficiency (HIV)

MS2 Bacteriophage (MS2), 15597-B1

This virus is a non-enveloped positive-stranded RNA virus of the bacteriophage family Leviviridae. Bacterial cells are the hosts for bacteriophages, and *E. coli* 15597 serves this purpose for MS2 bacteriophage. Its small size, icosahedral structure, and environmental resistance has made MS2 ideal for use as a surrogate virus (particularly in place of picornaviruses such as poliovirus and human norovirus) in water quality and disinfectant studies.

Permissive Host Cell System for MS2: *Escherichia coli*, 15597

99.99% Bacteria:

- Methicillin Resistant *Staphylococcus aureus* (MRSA)
- Vancomycin Resistant *Enterococcus faecalis* (VRE)
- *Streptococcus pneumoniae*
- *Streptococcus* Group A and B
- Pertussis (Whooping Cough)
- *Pseudomonas aeruginosa*

***Enterococcus faecalis* ATCC 29212**, a vancomycin-sensitive strain, has been extensively used as a representative control strain for clinical and laboratory experiments. Here we report the draft genome and annotation of this strain, containing 3,027,060 bp, with a G+C content of 37.2% in 126 contigs (≥500 bp).

***Pseudomonas aeruginosa* ATCC 27853** is usually used to test antimicrobial activity (6). Its genome sequencing will help us to understand the pathogenesis of this pathogen. *Pseudomonas aeruginosa* ATCC 27853 was obtained from the China General Microbiological Culture Collection Center (CGMCC) as CGMCC 1.2387. *Pseudomonas aeruginosa* is a common bacterium that can cause disease in animals and humans. It is found in soil, water, skin flora, and most man-made environments throughout the world. It is an opportunistic pathogen for both humans and plants

***Staphylococcus aureus* ATCC 700699** is gram-positive nonmotile coccus that grows in aerobic and anaerobic conditions, in which it forms grape-like clusters. *Staphylococcus aureus* is one of the major causes of community-acquired and hospital-acquired infections. It produces numerous toxins including superantigens that cause unique disease entities such as toxic-shock syndrome and staphylococcal scarlet fever. Mu50 is a MRSA strain with vancomycin resistance isolated in 1997.

***Streptococcus speices* ATCC 9884** -Group G B-hemolytic streptococci primary isolates obtained for testing from laboratory strains Microbiologists American type ATCC 9884. *Streptococcus pneumoniae* is the most common cause of pneumonia as well as a number of invasive diseases, such as meningitis and sepsis, and non-invasive mucosal diseases, such as otitis media and sinusitis. It causes severe morbidity and mortality worldwide, especially in young children and the elderly.

ungi:

- *Candida auris*
- Aspergillosis (*niger* and *fumigatus*)

***Cladosporium cladosporioides* 16022**

This heavily sporulating fungi is a dematiaceous mold, meaning that it is characterized by the olive-to-black pigmentation of its conidia and hyphae. It is prevalent in indoor and outdoor environments, and is a plant pathogen that affects wheat. Frequently isolated from air, *Cladosporium* has a world-wide presence and is one of the early colonizers of humid indoor environments growing on such substrates as gypsum, paper, paint, and textiles. As a common allergen, this species has been known to induce hay fever and asthma in humans.

Scheduled Testing February 2020

- Clostridioides difficile (C.diff) - Clostridium species
- Legionella
- Mycobacterium (TB)

Scheduled Testing 2nd Quarter 2020

- o Acinetobacter
- o Clostridioides difficile (C.diff) - updated terminology (C.diff used to refer to only Clostridium difficile; C.diff now refers to Clostridium species)
- o Extended-spectrum Beta-lactamase (ESBL) producing Enterobacteriaceae such as : Klebsiella pneumonia (KP) and Eschercolia (E.coli)
- o Typhoid fever
- o Carbapenem Resistant Enterobacteriaceae (CRE)
- o Neisseria gonorrhoeae
- o Campylobacter
- o Salmonella
- o Shigella
- o Legionella
- o Mycobacterium (TB)

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