

Supplemental data 2.

Known or putative virulence factors for *Yersinia pestis* separated into categories with a description of each type

Adhesion: The genes that produce these proteins by the bacteria are involved in the ability to attach to human tissue culture cells, and loss of these virulence factors decreases the organism's ability to attach and cause severe disease in the host.

Antigen: The proteins produced from these genes are located on the outside of the bacterial cell on the surface, and are important for the human hosts immune system to recognize the foreign bacteria.

Up regulated in human plasma at 37° C: These genes were up regulated in growth conditions resembling those encountered when causing disease in humans

Effectors: The proteins produced from these genes are secreted into host cells, often causing damage and degradation of components of the host cell.

Insect effectors. The proteins produced from these genes are secreted into the insect host cells, often causing damage and degradation of components of the host cell.

Host barriers: These genes produce proteins that are involved in protecting the bacteria from host defenses.

Iron acquisition: The proteins produced from these genes are involved in scavenging iron from the host through various mechanisms.

Phage component: These genes are part of a phage (a virus that infects bacteria), and when these phage genes are deleted, the strain is less virulent.

Regulator: These genes produce proteins that regulate the expression of other genes, some of which are virulence factors.

Secretion: The proteins produced from these genes comprise the bacterial machinery that secretes proteins, such as effectors, which once secreted into host cells can cause damage and degradation of the host cell.

Invasion: These genes produce proteins that have been found to be involved in the bacteria ability to invade human cells.