

Burkholderia



PLAY PICMONIC

Characteristics

Gram-Negative

[Graham-cracker](#) [Negative-devil](#)

Burkholderia species are gram-negative, with no retention of violet stain in gram staining. This species has two clinical pathogens: *B. cepacia* complex, which manifests with an opportunistic infection, and *B. pseudomallei*, which manifests with melioidosis.

Bacilli

[Rod](#)

This organism has a bacilli shape. It means that it is rod-shaped.

Catalase-Positive

[Positive-Cat](#)

Burkholderia is a catalase-positive organism, meaning it can produce the enzyme catalase, which catalyzes the breakdown of hydrogen peroxide into water and oxygen.

Oxidase Positive

[Ox-daisy](#)

Burkholderia is oxidase-positive, which means it can produce cytochrome c oxidase that works on the electron transport chain. This bacteria can use oxygen as a terminal electron acceptor in respiration, a crucial process for generating energy for the cell.

Non-lactose Fermenting

[Nun-Milk-carton](#) [Ferns](#)

Burkholderia is not able to ferment lactose as an energy source. This fact can be seen in its growth as white colonies on MacConkey agar.

Clinical Manifestations

Pneumonia

[Nude-Mona](#)

Burkholderia infection can present with encephalomyelitis, skin abscesses, and pneumonia.

Associations

Cystic Fibrosis

[Sisters with Fibrous-sacks](#)

Patients with cystic fibrosis are susceptible to Burkholderia infections, particularly those caused by the Burkholderia cepacia complex.

Considerations

Often Multidrug Resistant

[Drugs](#) [Wearing](#) [Resistant-bandana](#)

Burkholderia species are often multidrug resistant, which makes them particularly difficult to treat.

Contraindication

Contraindication to Undergo Lung Transplantation

[Lung](#) [Train-plant](#) [Caution-tape](#)

A patient infected with Burkholderia is contraindicated from undergoing lung transplantation due to its poor clinical outcome.