

## 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.