

Antimicrobial Resistance Gallery

Pseuda (*Pseudomonas aeruginosa*)

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Understanding Pseuda: The Resilient Antibiotic-Resistant Pathogen

Pseuda (*Pseudomonas aeruginosa*) is a bacterium that often flies under the radar but it is very good at dodging antibiotics, posing a significant threat as an antibiotic-resistant pathogen.

Under the microscope, Pseuda appears as a rod-shaped bacterium with a flagellum, which rotates like a propeller and enables it to swim and efficiently reach and colonize different surfaces. It can be found in various environments, including soil, water, and even on surfaces in hospitals. With its versatility and adaptability, Pseuda is able to survive in harsh conditions and this makes it challenging to eradicate - *it is a master of survival able to thrive in situations where other bacteria would run for cover.*

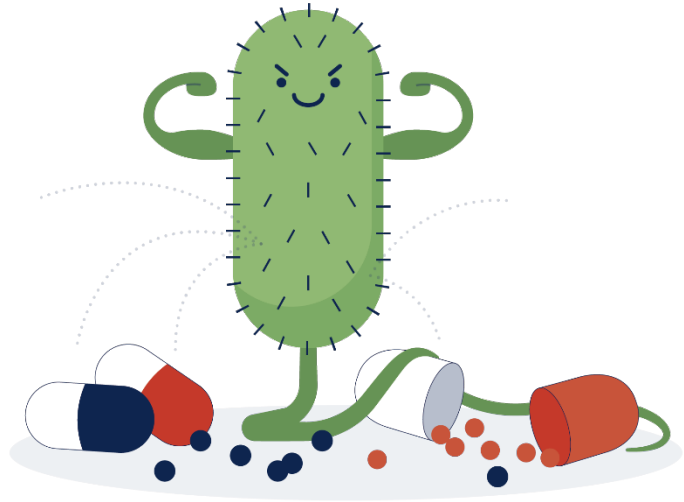
Since it is very versatile, we can find it causing a wide range of infections, including those of the lung (pneumonia), urinary tract, bloodstream, skin, eye and ear. Individuals with compromised immune systems, such as those undergoing chemotherapy, with severe burns and, in some cases, with drug and alcohol addictions, are particularly vulnerable to infections by this resilient microorganism. In hospitals, it can contaminate medical equipment and cause outbreaks among patients.

One of the most concerning aspects of Pseuda is its ability to resist multiple antibiotics. This bacterium has numerous mechanisms to evade the effects of antibiotics, making it challenging for healthcare professionals to effectively treat its infections. From impermeable outer membranes that prevent entry of the drug into the bacterial cell, to efflux pumps that actively

A child-centric microbiology education framework

remove antibiotics from within the bacterial cell, *Pseuda* employs a wide array of strategies to withstand antibiotic assault.

The emergence of antibiotic-resistant strains of *Pseuda* complicates treatment options for infections. Imagine trying to fight off an army of invaders with wooden spoons - that's what it's like for doctors trying to treat *Pseuda* infections with antibiotics. It can lead to longer hospital stays, more expensive treatments, and in some cases, serious illness or even worse.



Pseuda is a scary bug, right? However, there is some hope!

Scientists are exploring innovative approaches to combat antibiotic resistance, from developing new antibiotics, to exploring alternative treatment modalities such as phage therapy and combination therapies. Additionally, promoting a prudent and rational use of antibiotics is essential in curbing the further spread of antibiotic resistance.

Pseuda might be a tough opponent, but by gaining a deeper understanding of its characteristics, mechanisms of antibiotic resistance, and implications for public health, we can work towards developing effective strategies to combat this resilient bacterium and safeguard the well-being of people around the world.