

Pseudomonas

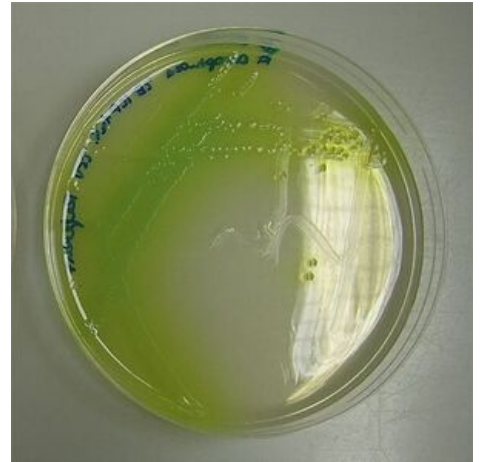
Template:Infobox - bakterie

The genus **Pseudomonas** belongs to the so-called gram-negative non-fermenting bacteria. The groups **Stenotrophomonas** and **Burkholderia** also belong to this group. Due to their common characteristics and traits, these genera can be put into context, in the medical sense, these genera are important mainly in terms of nosocomial infections.

Taxonomy

The taxonomy of the genus *Pseudomonas* is constantly renewed, the current classification is as follows:

- class **Gammaproteobacteria**
- order **Pseudomonadales**
- family **Pseudomonadaceae**
- genus **Pseudomonas**
- this genus includes many species of bacteria, the most important of which include:
 - *P. aeruginosa*
 - *P. alcaligenes*
 - *P. fluorescens*
 - *P. mendocina*
 - *P. putida*
 - *P. stutzeri*



Pseudomonas aeruginosa is characterized by its green-blue pigment

Occurrence

They are especially common in **humid environments**. So they inhabit **soil, surface water, plants**, but mainly medically important – **hospital equipment**. In pathogenesis, the products of these bacteria and the structure of their cell wall, specifically its outer parts formed by lipopolysaccharides, play a role. It is the construction of this membrane that is responsible for the resistance of bacteria to antibiotics. **Multi-resistance** to antibiotics is a major therapeutic problem. However, today it is undergoing a renaissance of colistin in parenteral form, which is often the last "in vitro" effective drug.^[1]

Significant Representatives

The most important member of the genus *Pseudomonas* is the bacterium ***Pseudomonas aeruginosa*** .

 For more information see *Pseudomonas aeruginosa*.

Links

Related Articles

- *Pseudomonas*, *Stenotrophomonas*, *Burkholderia*
- *Pseudomonas aeruginosa*

External links

- *Burkholderia* description page (pathema.jcvi.org) (http://www.jcvi.org/cms/research/past-projects/pathema/overview/?page=burkholderia_description)
- Recent advances in the treatment of *Pseudomonas aeruginosa* infections in cystic fibrosis (ncbi.nlm.nih.gov) (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3087692/>)
- Taxonomy browser (ncbi.nlm.nih.gov) (<https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi>)

Used literature

- POVÝŠIL, Ctibor – ŠTEINER, Ivo. *Obecná patologie*. 1. edition. Praha : Galén, 2011. 290 pp. Chapter 13 : Obecná onkologie. pp. 133-190. ISBN 978-80-7262-773-8.

- VOTAVA, Miroslav. *Lékařská mikrobiologie speciální*. 1. edition. Brno : Neptun, 2003. 495 pp. Chapter 1.1: Gramnegativní nefermentující bakterie. pp. 29-37. ISBN 80-902896-6-5.
- KAYSER, Fritz H. – BIENZ, Kurt A.. *Medical Microbiology*. 1. edition. Německo : Thieme, 2005. 268 pp. pp. 308-311. ISBN 9781588902450.
- SEDLÁK, Kamil – TOMŠÍČKOVÁ, Markéta. *Nebezpečné infekce zvířat a člověka*. 1. edition. Praha : Scientia, 2006. 167 pp. pp. 147-148. ISBN 80-86960-07-2.

Reference

1. LINCOVÁ, Dagmar – FARGHALI, Hassan. *Základní a aplikovaná farmakologie*. 2. edition. Praha : Galén, 2007. vol. 672. pp. 495. ISBN 978-80-7262-373-0.