Proteus vulgaris

- Gram negative rods (0.4-0.8µm in diameter, 1.0-3.0µm in length)
- Motile
- Facultative anaerobe
- Chemoorganotrophic (both respiratory and fermentative metabolism)
- Optimal temperature - 37°C
- Fermentation of glucose, but not lactose (formation of acid and gas)
- Oxidase negative
- Catalase positive
- Methyl red positive
- Voges-Proskauer variable
- Citrate variable
- Hydrogen sulfide (H₂S) positive (usually)
- Urea positive
- Reduction of nitrate to nitrite
- Normal flora of the intestine - opportunistic pathogen
- Found in manure, soil, and water
- Can cause urinary tract infections
- Secondary invaders - septic lesions in burn patients