

# Practical 5

Burri's India ink method  
(capsules)

# Capsules

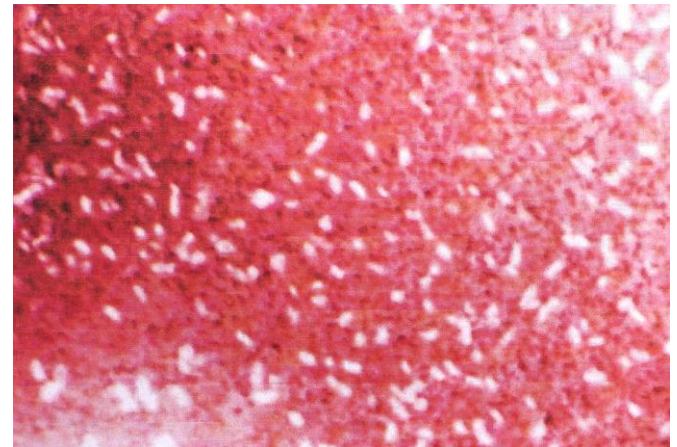
- Extracellular structures overlying the cell wall
- protective structure surrounding some bacteria
- Polysaccharide ( exception *B. anthracis* – polypeptid)
- Tool of virulence
  - promote bacterial adhesion to surfaces (adhesin)
  - defense mechanism against phagocytosis
- Some bacteria can be present in form of encapsulated and nonencapsulated strains :  
(*Haemophilus influenzae b*)

# Burri's method for capsule detection

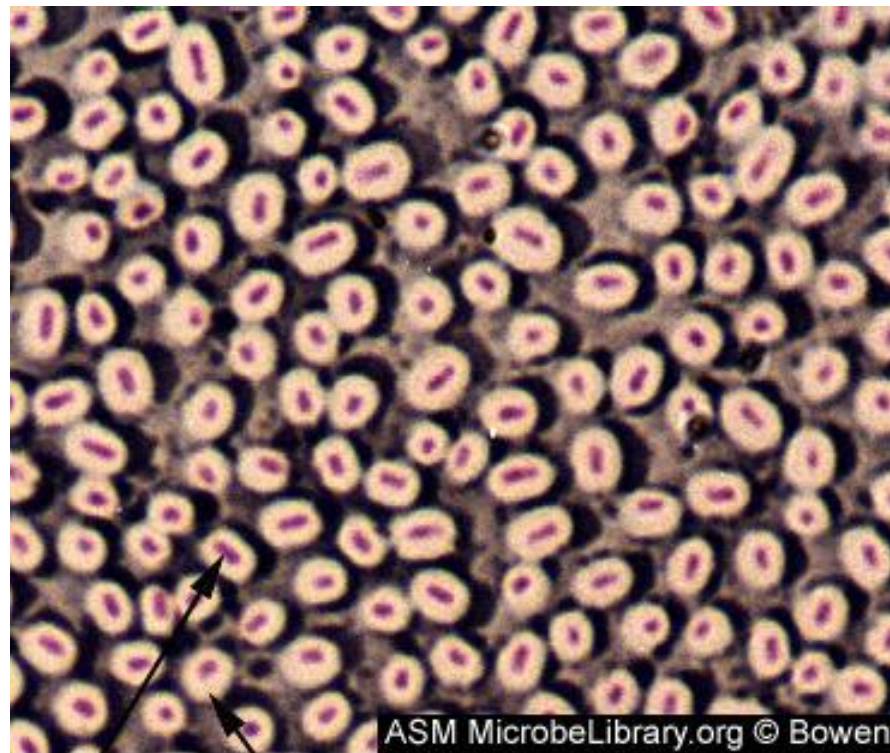
- Prepare the suspension : bacteria+ink
- make a thin smear
- Dry on air and fix with heat
- Counterstain with carbol fuchsin (1-2min)
- rinse very carefully with water
- let dry on air and read with immersion

# *Klebsiella pneumoniae* -Burri

- On black smear capsules are represented by uncolored space in forme of rod (appear as clear halos surrounding the bacterial cells)
- In the white space the carbol fuchsin counterstained rods can be indentified - pink



# Encapsulated rod - scheme



Cell

Capsule

