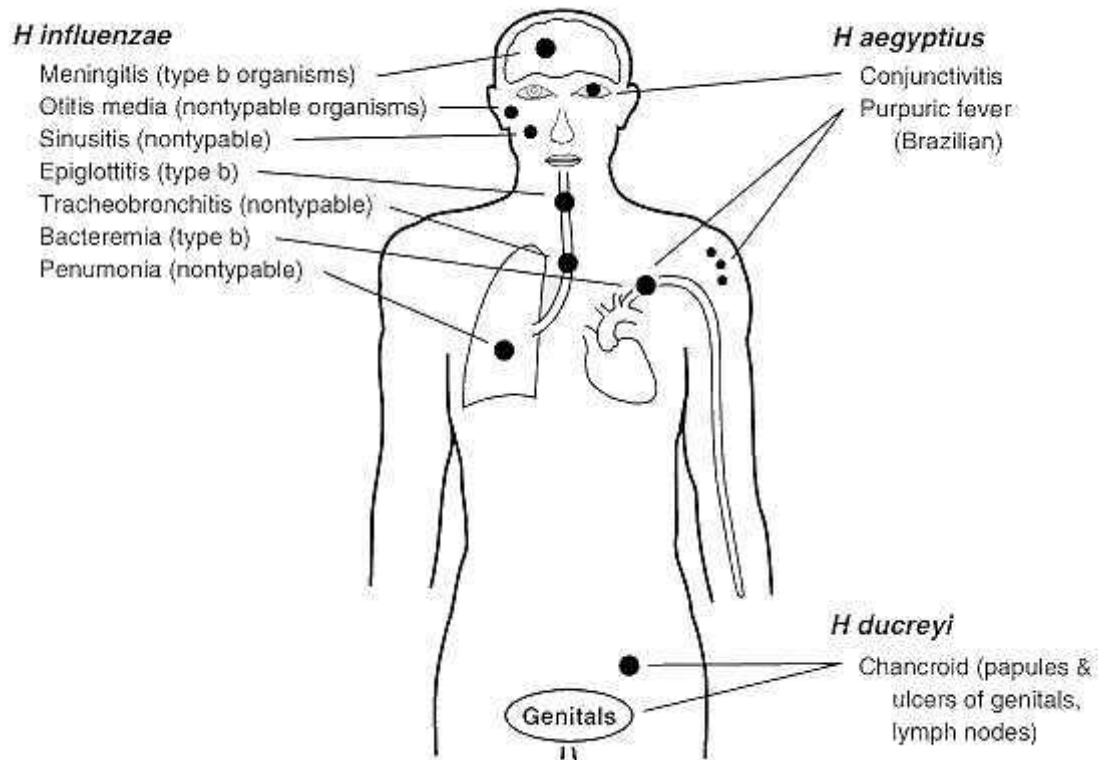


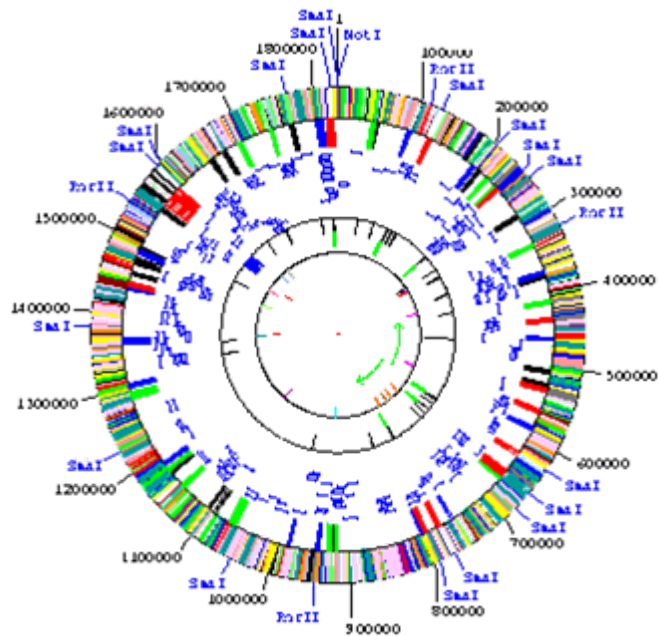
# Haemophilus

Respiratory infections; meningitis;  
chancroid

# *Haemophilus influenzae*



# Discovery



- 1883 Koch
- 1890s Pfeiffer
- 1995 entire genome was sequenced

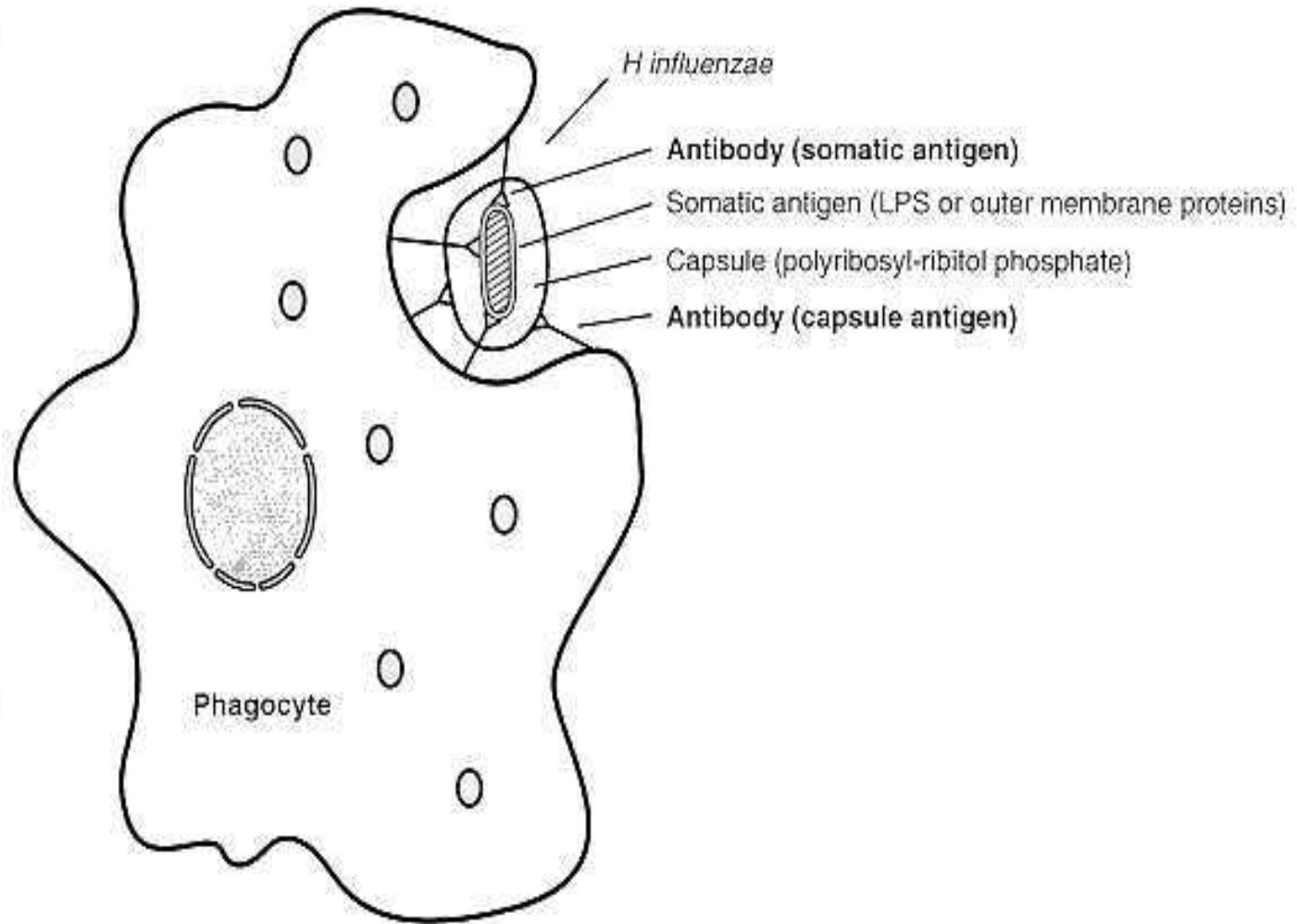
# The Organism: Morphology

- is a small,
- nonmotile
- Gram-negative bacterium
- Capsule:
  - Capsulated → coccobacillus
  - Non-capsulated → pleomorphic
- highly adapted to its human host
  - nasopharynx

# The Organism: Metabolism

- facultatively anaerobic
- Anaerobic growth ↓ haemin requirement
- does not require a CO<sub>2</sub> enriched atmosphere
- Biochemical reactions
  - generally-catalase positive and oxidase-positive;
  - reduce nitrate to nitrite and ferment glucose.
  - Patterns of acid production from other carbohydrates are used to identify the species

# Pathogenesis: Virulence



# Pathogenesis: Normal Carriage

- exclusively a human parasite
- upper respiratory tract
- Immunization reduces carriage

# Pathogenesis: Invasive infections



# Other Haemophili

- Occasionally implicated in human disease
  - *H. parainfluenzae*
  - *H. aphrophilus*
  - *H. paraphrophilus*