

Endotoxins and Exotoxins → stain purple due to their thick peptidoglycan cell wall (Thick)

## Endotoxins

- G-
- component of LPS (Lipopolysaccharide)
- Released when Bacteria die or lyse.
- produce Exotoxins
- some can form spore (G+ Rods only)
- The toxic part is lipid A

Exotoxins are toxic proteins that are actively secreted by bacteria into the surrounding tissue or bloodstream

## Gram positive +

Rods

cocci

Spore

Non-spore

Aerobic

Anaerobic

Aerobic

Anaerobic

Bacillus Anthracis



(capsule - poly-D-glutamic acid)

Bacillus Cereus

Enterotoxins → diarrhea

→ ocular infe



clostridium

① difficile

- taking Antibiotics
- toxin A, toxin B
- Enzyme immunoassay test (EIT)

② perfringens

→ Make complete hemolysis and partial hemolysis.

→ Enterotoxin

→ α-toxin / θ toxin

→ Myositis and myonecrosis (gas gangrene)



③ tetani

→ tetanolysin → X RBC

→ tetanospasmin → X GABA X Gly

→ spastic paralysis

④ botulinum

- Foodborn botulism
- Infant botulism



→ Flaccid paralysis X Ach

① Nocardia

→ weakly acid fast stain

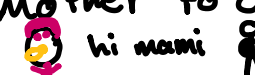
→ Exogenous inf

→ Avoid phagocytic killing

→ Pustules and grains

② Listeria monocytogenes

→ Mother to child



③ Corynebacterium diphtheriae

→ Exudative pharyngitis



→ Affect protein synthesis

① Actinomyces

→ cervicofacial

→ draining sinus

② Mobiluncus

M. Crutisii → in bacterial vaginosis

③ Lactobacillus

→ commonly found in probiotics

→ Facultative Anaerobic

④ Propionibacterium

→ found on the skin

→ acne vulgaris



⑤ Bifidobacterium and Eubacterium

→ found in the oropharynx