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Gram-positive Bacteria Cell

Gram-positive Bacteria Cell Wall

The Gram positive cell wall has a thick **peptidoglycan** (orange red in this picture) layer outside the **plasma membrane**. There may be a gap or **periplasmic space** between the peptidoglycan layer and the **plasma membrane**. Various **membrane proteins** can be seen floating in the **plasma membrane**. Elongate molecules called **teichoic acids** intermesh with the **peptidoglycan** layer. Some of the teichoic acid molecules have a lipid portion (and are called **lipoteichoic acids**) which binds the molecules to the underlying **plasma membrane**. In this diagram, the outer aspect of the wall is covered in a regular arrangment of proteins called an **S-layer**. A good example of an S-layer is shown in our diagram of anthrax.

http://www.rkm.com.au/BACTERIA/Gram-positive-wall.html

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Gram-negative Bacterial Cell

Gram-negative Bacteria Cell Wall

The Gram negative cell wall has a thin **intermediate peptidoglycan layer** and an **external membrane**. The outer portion of the external membrane is a **lipopolysaccharide layer**. This layer comprises a lipid-A part buried in the outer membrane, core polysaccharide and O-side chains. These side chains are absent in Yersinia pestis.

http://www.rkm.com.au/BACTERIA/Gram-negative-wall.html