

Second Stage – LAB.12

***Brucella* spp. :**

Members of the genus *Brucella* are primarily pathogens of animals (domestic and feral). Thus, brucellosis (**undulant fever, Malta fever**) is a zoonosis (a disease of animals that may be transmitted to humans under natural conditions). The disease in humans, is characterized by an acute bacteremic phase followed by a chronic stage that may extend over many years and may involve many tissues. Different species of *Brucella* are each associated with particular animal species; for example, *B. abortus* (cattle), *B. melitensis* (goats and sheep) *B. ovis* (sheep) and others. The *brucellae* G-ve small coccobacilli arranged singly or in pairs, aerobic, facultative intracellular parasites that can survive and multiply within host phagocytes. unencapsulated, lipopolysaccharide is the major virulence factor, as well as the major cell wall antigen. nonmotile, and non-spore-forming

-Typical Organisms

The appearance in young cultures varies from cocci to rods in length, with short coccobacillary forms predominating. They are gram-negative but often stain irregularly.

-Culture:

Small, convex, smooth colonies appear on enriched media .

-Growth Characteristics:

The organism can be cultured from blood and other body fluids or from tissue specimens. Multiple blood specimens should be cultured. Brucellae are adapted to an intracellular habitat, and their nutritional requirements are complex. Some strains have been cultivated on defined media containing amino acids, vitamins, salts, and glucose.