Seminar in Microbiology
Monday, February 17, 2020
Salle de séminaire, E07.3347.a, CMU

11:30 – 12:30

Maximiliano Gutierrez
Crick Institute London

Intracellular environments and antibiotic efficacy in tuberculosis

https://www.crick.ac.uk/research/labs/maximiliano-gutierrez:

Tuberculosis is an infection caused by *Mycobacterium tuberculosis* (Mt) bacteria. This devastating disease is a major global health problem and a leading cause of death worldwide.

In 2016, more than 10 million people fell ill with tuberculosis while 1.7 million died from it. The bacteria hide in our body within our immune cells, hijacking our defences and in some cases establishing what’s known as a latent infection. More than two billion people around the world are thought to have latent tuberculosis.

We are investigating how the tuberculosis bacteria manage to outsmart our body’s defences and survive inside human cells. To do this, we are using powerful microscopes to see what’s going on inside cells when they become infected.

We want to find out how Mt avoids the usual ‘garbage disposal’ systems that cells use to kill harmful invaders and how the bacteria adapt to long-term life inside their host cells. And we are also trying to understand how our cells can eliminate bacteria living within them. This is important to find possible therapeutic strategies that enhance this natural response.

By understanding how Mt survives and thrives inside cells, we hope to find new approaches for treatments that help to eradicate tuberculosis.

Contact: T. SOLDATI