

Before cell division, bacteria need to duplicate their genetic material and assure that each of the daughter cells receives its copy. Bacterial chromosome segregation is the active process, dependent on specialised segregation proteins, but the exact mechanism of this process is unknown. The chromosome segregation needs to be tightly coordinated with the other cell cycle process: chromosome replication, cell elongation and cell division. Our research will focus on the coordination of these processes in mycobacteria, the group of bacteria that includes pathogenic *M. tuberculosis*. The aim of our studies is to identify the proteins that coordinate the chromosome segregation with the cell cycle and analyse their mechanism of action. Understanding of such critical cell cycle processes will help to elucidate mycobacterial ability to enter dormant, non-replicating state, which allows them to survive unfavourable environmental conditions and cause latent infections.