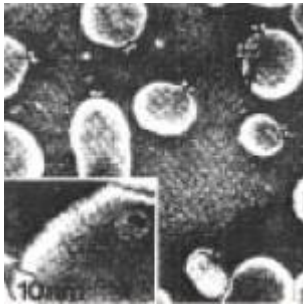


# Diversity of lipid envelopes in *Mycobacterium tuberculosis*



Multi-drug resistant forms of *Mycobacterium tuberculosis* (M.tb) hamper global efforts to control the spread of TB, a threat to public health programmes in many countries. There is a need to better understand adaptation of M.tb in an infected person that can guide the development of more effective TB treatment and control strategies. In the most recent PloS Pathogens, a study by O'Neill et al identified M.tb evolution within individual TB+ patients. They found that within TB+ patients, there was a diverse population of M.tb and that the bacilli evolves in “response to selection pressures imposed by the environment within hosts”.

Evolutionary changes were notable in M.tb genes involved in the regulation, synthesis, and transportation of lipids and glycolipids of the bacterial cell envelope. The authors speculate from their data that “rapid adaptation of cell envelope lipids is facilitated by functional redundancy, flexibility in their metabolism, and their roles mediating interactions with the host.”

[O'Neill, M. et al. 2015. Diversity of \*Mycobacterium tuberculosis\* across Evolutionary Scales. \*PLoS\*.](#)