

## **Towards Structural characterisation of T7SS of M. Tuberculosis**

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Pathogenic mycobacteria utilize a common “Trojan Horse” strategy to infect their host cells, i.e. they get phagocytosed and should be killed. Instead, these bacteria are able to rupture the phagosome membrane before its maturation into phagolysosome by secreting different proteins (EsxAB). Set free in the cytosol, those pathogens can replicate and control the cell death of their host. These “Phagosomal Escape” depends on the presence of the protein complex ESX-1 of the Type Seven Secretion System family (T7SS).

We present here the first results regarding the structural investigations of a native ESX-1 complex as well as an ESX-1 substrate.

In addition, we will report about the setting up of a new lab. M4I is a brand new institute supported by a healthy capital investment. We will outline M4I’s structure, describe our efforts on cryo-correlative workflow, and report about the development of tools to support this.