# Targeting *Mycobacteria tuberculosis* isocitrate lyases to treat latent tuberculosis

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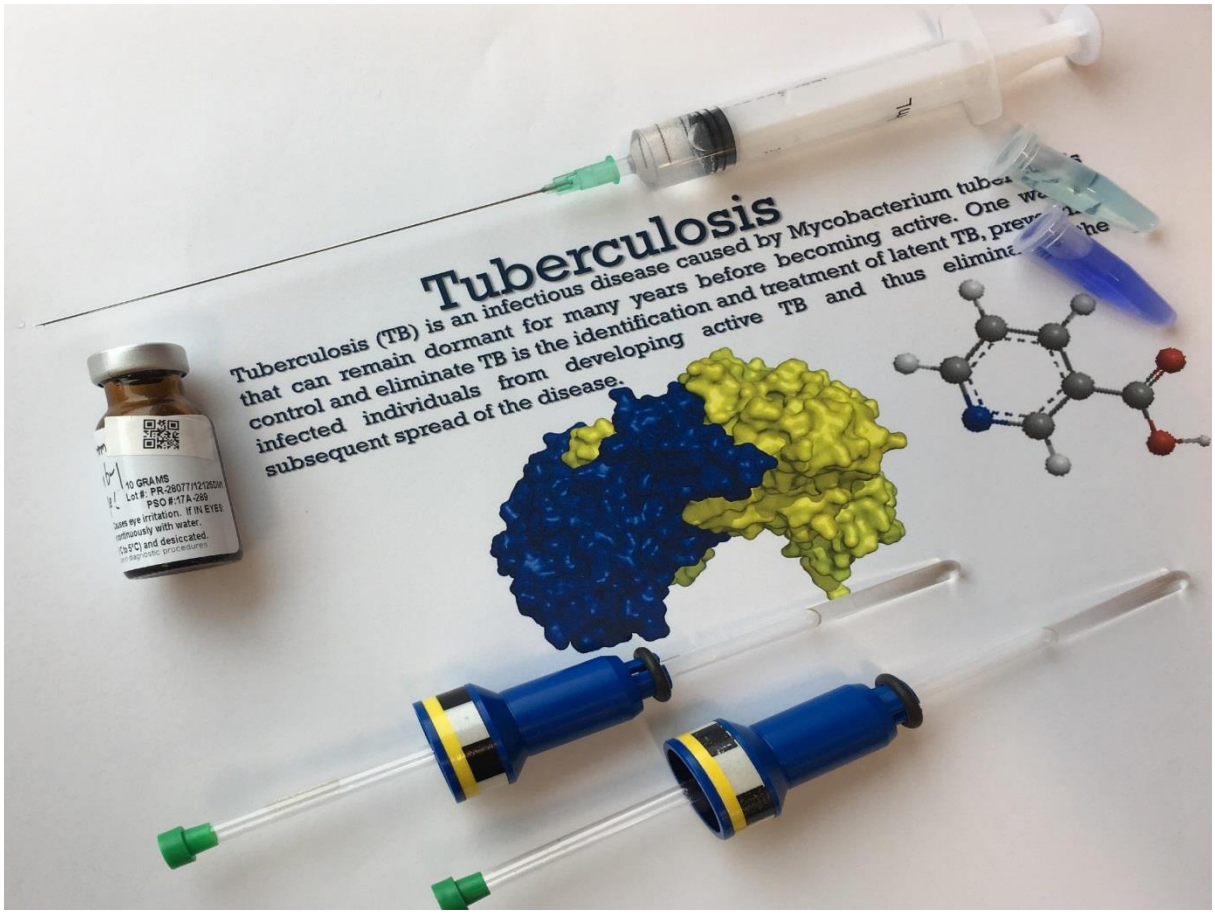
Tuberculosis (TB) is an infectious disease that is caused by *Mycobacterium tuberculosis*. TB has a long latency period; once a human is infected with *M. tuberculosis*, the bacteria may stay inactive within macrophages for many years leading to a syndrome that is known as latent TB. As *M. tuberculosis* can only spread from those who have developed active pulmonary TB, treatment of latent TB infection for high risk individuals is a viable strategy to control the disease. The enzymes isocitrate lyase (ICL) isoforms 1 and 2 play essential roles in the survival of *M. tuberculosis* in the latent phase. ICLs are not present in humans and are therefore promising potential therapeutic targets for the development of new anti-TB agents. Herein, we describe our use of a combined structural biology, molecular biology, computational chemistry and biophysical approach to obtain structural and mechanistic understandings of the *M. tuberculosis* ICL enzymes. Our work may pave way for the development of new therapeutic agents against TB.




1. Bhusal, R. P.; Bashiri, G.; Kwai, B. X. C.; Sperry, J.; Leung, I. K. H. *Drug Discovery Today* **2017,** *22*, 1008-1016.