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**Rv1675c is involved in regulation of cAMP-induced genes in
Mycobacterium tuberculosis**

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Mycobacterium tuberculosis (Mtb), the causative agent of tuberculosis (TB), kills two million people worldwide each year. The genome of Mtb encodes for 15 possible adenylate cyclases, suggesting an important role for the secondary messenger cAMP in Mtb gene regulation. We have previously identified a set of exogenous cAMP-induced (EcAI) genes, and in the current study we show that these EcAI genes are also regulated under conditions of physiological importance, namely low pH, starvation, and during intracellular growth inside macrophages. Additionally this regulation is affected by the cAMP-binding, DNA-binding protein Rv1675c. The EcAI genes are dysregulated in a Rv1675c knock-out strain of *M. bovis* BCG and fail to respond to exogenous cAMP or regulate under various environmental conditions as they did in wildtype BCG. Electrophoresis gel mobility shift assays have shown that Rv1675c binds to Rv1265 and groEL2 promoters suggesting it directly contributes to their regulation, while its effect on the other EcAI genes may be secondary. We propose that Rv1675c is a transcriptional regulator involved in the cAMP network in Mtb and studies are underway to determine its binding recognition sites.