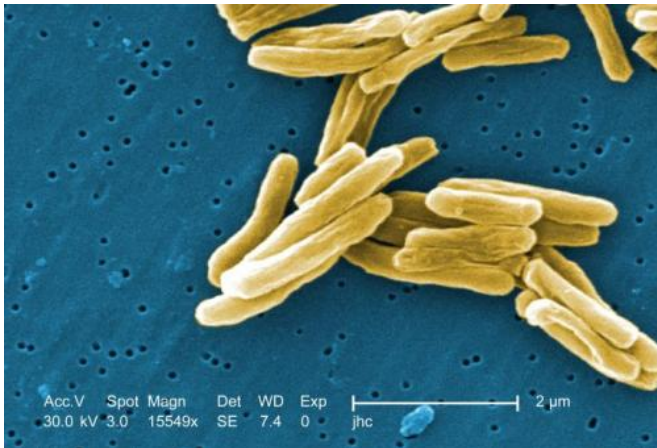


# Potential new drug for tuberculosis

5 August 2013



production.

The findings support the concept of targeting ATP synthesis to potentially eradicate both active and latent *M. tuberculosis* and provide a new candidate for clinical validation.

**More information:** *Nature Medicine* (2013)  
doi:10.1038/nm.3262

Provided by ResearchSEA

Some strains of *Mycobacterium tuberculosis*, the bacterium that causes TB, have become resistant to most antibiotics — but researchers hope that a new synthetic molecule will be a more formidable weapon to fight them. Credit: CDC/ Dr. Ray Butler

A new drug capable of inhibiting growth of *Mycobacterium tuberculosis* is reported this week in *Nature Medicine*. The findings may improve therapeutic options for the treatment of drug resistant tuberculosis (TB).

One-third of the world's population is latently infected with *M. tuberculosis* and more than a million people die of TB each year. Multidrug-[resistant strains](#) of *M. tuberculosis* are spreading, and therefore the need to develop new and improved drugs is urgent.

Kevin Pethe and colleagues screened a chemical library for inhibitors of *M. tuberculosis* growth in [macrophages](#) and identified imidazopyrimidine amides as potential candidates. The team then optimized these chemicals in order to generate the compound Q203. This compound, which showed efficacy in vitro and in a mouse model of established TB, targets part of the *M. tuberculosis* electron chain and therefore inhibits ATP synthesis—which is needed for cellular energy

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