

Discovery could lead to new treatment strategy against tuberculosis

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By uncovering the 3-dimensional structure of an enzyme that is critical for the survival of the bacterium that cause tuberculosis, researchers may be one step closer to developing a new strategy to combat TB infections.

The enzyme, ketol-acid reductoisomerase (KARI), is central to a [metabolic pathway](#) for making 3 key amino acids—valine, leucine and isoleucine—that are crucial to life itself. This pathway is present only in plants, fungi and bacteria, but it is not found in animals. For this reason new drug leads that target this [enzyme](#) are likely to have minimal toxicity against human cell lines.

"Compounds that block this pathway are already successful herbicides. Our goal is to use the structural information presented in this report to "design" compounds that specifically block the activity of the KARI in *Mycobacterium tuberculosis*," said Dr. Luke Guddat, senior author of *The FEBS Journal* article.

More information: You Lv et al. Crystal structure of ketol-acid reductoisomerase at 1.0 Å resolution: A potential target for anti-tuberculosis drug discovery , *FEBS Journal* (2016). [DOI: 10.1111/febs.13672](https://doi.org/10.1111/febs.13672)

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