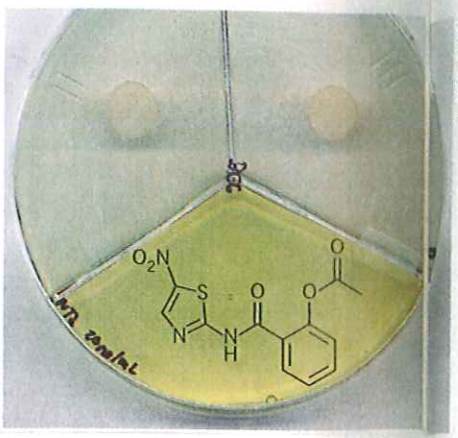
KILLING TB IN ITS SLEEP

A drug already approved by FDA for treating diseases caused by parasitic protozoans such as *Giardia lamblia* is also effective against cultures of the bacterium that causes tuberculosis, according to a study in the *Journal of Medicinal Chemistry* (DOI: 10.1021/jm9010719). The agent, nitazoxanide, could be a good starting point for designing new TB drugs. Eradicating TB with established drugs takes months or years, a shortcoming that likely occurs because the drugs can't kill bacteria that aren't actively replicating. Luiz Pedro S. de Carvalho and coworkers in Carl Nathan's lab at Weill Cornell Medical College set out to find molecules that kill nonreplicating TB strains. "Bacteria rely on different metabolic pathways when they're hunkering down, which makes them much harder to kill," Nathan explains. The team's search turned up nitazoxanide, which kills both replicating and nonreplicating TB in culture. So far, TB mutants resistant to nitazoxanide haven't cropped up, which suggests the drug might have multiple biochemical targets, Nathan says. The drug hasn't yet been tested on multi-drug-resistant or extensively drug-resistant TB strains, he adds.–CD



Nitazoxanide (shown) solution kills a close relative of TB bacteria in a culture dish; control sections of the dish still contain live bacteria (white circles).

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