

Delayed arrival of TB-fighting T cells

June 14 2010

The outcome of tuberculosis infection in mice depends in part on how quickly bacteria-fighting T cells can get to the lungs. According to a new study that will appear online on June 14th in the *Journal of Experimental Medicine*, another group of T cells delays their arrival.

Previous research has shown that ridding the body of the hindering T cells—known as regulatory T cells—enhances the body's ability to fight off TB-causing [bacteria](#). But exactly when and where regulatory T cells act was uncertain. The new study shows that these cells are activated at the same time and place as their bacteria-fighting "effector" cell counterparts. In response to infection, both populations expand in the lymph nodes that drain the lung. As a result, fewer effector T cells become activated and are dispatched to the lungs to fight the bug.

Others have shown that the most deadly [strains](#) of TB generate the most regulatory T cells, suggesting that this may be a tactic used by the bacteria to sidestep immune attack. Whether clinicians can devise a strategy to interfere with these troublesome cells in humans remains to be seen.

More information: Shafiani, S., et al. 2010. *J. Exp. Med.*
[doi:10.1084/jem.20091885](https://doi.org/10.1084/jem.20091885).

Provided by Rockefeller University

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