Better immune defense against anthrax

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Scientists discover a gene in anthrax-causing bacteria may help defend against this form of bio-warfare.

Spread of the deadly disease [anthrax](#) by spores of the bacterium [Bacillus anthracis](#) is a known terrorism risk and protection includes finding ways to treat the disease, according to an academic paper reviewed by *Faculty of 1000*.

Scientists from the University of California (San Diego) have identified a gene in *B. anthracis* that not only contributes to the severity of the anthrax disease but also makes it more difficult for a patient's immune system to fight the infection.

Mattias Collin, of Lund University, and Marc A. Williams, of the University of Rochester, praised the study as "a true tour de force" on the *Faculty of 1000* Biology website and noted that this might provide a new way to treat anthrax poisoning. If the gene, known as ClpX, is inactivated in the anthrax-causing [bacteria](#), the body's natural defence mechanism can better fight the disease.

"This study has indeed identified a potential treasure trove in ClpX", Colin and Williams wrote. While there is much left to learn about the exact mechanism the bacteria use ClpX to attack their hosts, the *Faculty of 1000* members added the study will "unveil novel targets for [therapeutic intervention](#) in treating anthrax in human subjects.

More information: The full text of the evaluation of "ClpX Contributes

to Innate Defense Peptide Resistance and Virulence Phenotypes of Bacillus anthracis" is available at f1000biology.com/article/id/1163604

Source: Faculty of 1000: Biology and Medicine

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