

# Substance that knocks out anthrax

November 29 2005

---

Researchers at Stockholm University have found a substance that quickly knocks out the anthrax bacterium. The bacterium has been used in terrorist attacks in the US and Japan, for example.

The scientists have identified the enzyme in the bacterium that makes it multiply. The substance N-hydroxylamine arrests the enzyme, and the bacterium stops growing.

“An anthrax infection in the lungs develops very rapidly and must be stopped as quickly as possible. This can be done by combining the substance N-hydroxylamine with ordinary antibiotics that work more slowly,” says Professor Britt-Marie Sjöberg, Department of Molecular Biology and Functional Genomics.

Medicine is actively looking for ways to effectively and inexpensively treat segments of the population that are exposed to anthrax spores, which cause extremely severe symptoms and/or are multi-resistant.

The discovery may play a major role in enhancing our preparedness for possible terrorist attacks, for instance. What’s more, the scientists behind the study show that it is possible to find substances that effectively knock out corresponding enzymes in other similar pathogenic organisms.

“The fact that we have identified a chemically simple and commercially available substance with these properties is of great significance both practically and in terms of further research,” adds Britt-Marie Sjöberg.

The findings are being published in the scientific journal Proceedings of the National Academy of Sciences of the United States of America (PNAS) on November 28, [www.pnas.org](http://www.pnas.org) . The authors are Eduard Torrents, Margareta Sahlin, Professor Britt-Marie Sjöberg, Department of Molecular Biology and Functional Genomics; Professor Astrid Gräslund, Department of Biochemistry and Biophysics; and Daniele Biglino, now at the Max Planck Institute in Mülheim an der Ruhr, Germany.

Source: The Swedish Research Council

Citation: Substance that knocks out anthrax (2005, November 29) retrieved 26 April 2024 from <https://phys.org/news/2005-11-substance-anthrax.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.