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Japanese scientists devise a method for developing living antibiotic

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The researchers were able to manipulate the predatory life cycle of Bdellovibrio bacteriovorus by using a chemical chemical theophylline.



A group of researchers at the Okinawa Institute of Science and Technology (OIST) in Japan have discovered a method to manipulate the predatory behavior of bacteria, which may help tackle the problem of antibiotic resistant microbes.

The researchers were able to manipulate the predatory life cycle of *Bdellovibrio bacteriovorus* by using a chemical chemical theophylline. *B. bacteriovorus* is not a known pathogen to humans. It is a known pathogen to Gram-negative bacteria including disease-causing pathogens such as *Escherichia coli*, Salmonella, Legionella, making it a possible biocontrol agent to many human pathogens.

The researchers used riboswitches, which are gene expression-controlling tools known to function well in other bacteria, to tackle the challenge of understanding and manipulating B. bacteriovorus predation.

The researchers believe that the predatory bacteria may be a potentially safe alternative to antibacterial agents for some plant diseases. It can also be used for water treatment plants. In the future, one could also spray these bacteria on fresh food to protect against food poisoning.