

Antibiotic fights back

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Chemists have synthesized a version of the antibiotic vancomycin that can kill bacteria that are resistant to the drug.

Vancomycin is one of the last lines of antibiotic defence, but some bacteria shrug it off. A single atom of one cell-wall molecule is altered in these strains, limiting the antibiotic's ability to bind to the bacteria.

It took Brendan Crowley and Dale Boger of the Scripps Research Institute in La Jolla, California, 24 chemical steps to manufacture a form of vancomycin with a compensating one-atom change. The molecule can kill both vancomycin-susceptible and vancomycin-resistant bacteria, and could replace the current antibiotic if cheaper manufacturing methods are found.