Scientists re-engineer antibiotic

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Scientists have re-engineered an antibiotic that attacks bacteria by inhibiting cell wall synthesis, thereby significantly increasing its effectiveness.

The scientists replaced a single atom from the molecular structure of vancomycin aglycon, a glycopeptide antibiotic. In recent years, a number of the most common strains of enterococci have become resistant to vancomycin.

The re-engineering effort could help make the drug more effective in treating infections produced by vancomycin resistance enterococci, a serious and growing problem in the nation's hospitals.

"The continued rise of vancomycin-resistant infection poses a serious threat to hospital patients in the United States and around the world," said Professor Dale Boger of the Scripps Research Institute in La Jolla, Calif.

The study, published in the Journal of the American Chemical Society, was conducted by Brendan Crowley, a doctoral candidate at Scripps Research's Kellogg School of Science and Technology, and Boger.