

Back to: [NIDCR Home](#) > [News & Reports](#) > [Science News In Brief](#)

## First "Smart" Antimicrobial Reported

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One of the problems with current antibiotics is they kill indiscriminately, numbering among their victims benign and/or beneficial species of bacteria that inhabit our mouths, gut, intestine, and other parts of the body where biofilms form. This less-than-optimal treatment outcome has led some scientists to ask whether it might be possible to create a new generation of antibiotics that selectively kills the bad bugs but leaves the good ones alone. In the April issue of the journal *Antimicrobial Agents and Chemotherapy*, a team of scientists supported by NIDCR and dental industry sponsors report taking an important step forward in designing these so-called "smart" antimicrobials. The scientists successfully synthesized a chimeric, 36-amino-acid compound that specifically targets *Pseudomonas* species. It consists of a peptide that locks onto *Pseudomonas* species like a homing device on a missile and a second peptide that, once delivered, kills the bacteria. According to the authors, this marks the first synthetic, target-specific antimicrobial of its kind and lays the intellectual foundation for developing additional smart antimicrobials. To read more about this work, [click here](#).

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- ▶ [Calendar of Events](#)
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- ▶ [Media: The Inside Scoop](#)
- ▶ [News Releases](#)
- ▶ [Reports and Presentations](#)
- ▶ [Science News In Brief](#)

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