

How to fight drug-resistant bacteria

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This year, the U.S. reported for the first time that a patient had been infected by bacteria resistant to colistin, an antibiotic of last resort. The announcement followed several years of warnings that current antibiotics aren't diverse enough to fight pathogens as drug resistance spreads. The cover story of *Chemical & Engineering News* (C&EN), the weekly newsmagazine of the American Chemical Society, sums up how researchers are trying to stay ahead of the bugs.

Ann M. Thayer, a senior correspondent at C&EN, notes that antibiotic-resistant pathogens already cause at least 2 million illnesses and 23,000 deaths each year in the U.S. alone. And the development pipeline for new treatments to deal with this growing problem is anemic. About 40 small molecules and two dozen other approaches, such as antibodies and vaccines, are in clinical testing. Only about one in five are expected to earn approval for patient use. In addition, sparse funding, poor business prospects and regulatory issues can stand in the way of development.

Despite the hurdles, there is hope. Researchers are getting creative in their strategies for defeating infection-causing [bacteria](#). They're designing drugs to overcome existing resistance mechanisms. Their tactics include making drugs that attack [pathogens](#) on multiple fronts, and that neutralize illness-causing bacterial toxins rather than killing the bugs themselves. To help encourage the development of new solutions, policymakers are proposing various bills to ease the financial and regulatory burdens. And new government and nonprofit funding is becoming available.

More information: Antibiotics: Will the bugs always win? -
[cen.acs.org/articles/94/i35/An ... bugs-always-win.html](http://cen.acs.org/articles/94/i35/An...bugs-always-win.html)

Provided by American Chemical Society

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