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Number of drug candidates to fight superbugs shrinks significantly in past 5 years

The global pipeline of new antibiotics is shrinking while drug-resistant infections are rising.



Only a handful of large pharmaceutical companies remain active in the field. Smaller biotech firms are increasingly stepping in, but they face financial constraints. | Waltraud Grubitzsch/picture alliance via Getty Images

by [Giedrė Peseckytė](#) • 1 HOUR AGO • 4 MINUTES READ

The pipeline of promising new medicines to treat drug-resistant infections has shrunk by more than a third in the past five years, leaving very few potential future options to fight off deadly microbes.

The world is in desperate need of new antibiotics as microbes become increasingly resistant to existing drugs. This caused more than 1 million years of life lost because of premature death or disability in the EU and European Economic Area in 2022, and cost health systems about [€1.1 billion](#) in 2019.

Amid this challenge, pharmaceutical companies are quitting antimicrobial development. That's because of the steep costs of developing novel treatments, but with limited market rewards: These drugs are to be used as a last resort and are unlikely to rake in blockbuster sales.

A new report from Access to Medicine Foundation — the [2026 Antimicrobial Resistance Benchmark](#) — finds the number of antimicrobial projects from major pharmaceutical companies has fallen 35 percent in the past five years, from 92 in 2021 to just 60 today.

“We simply don't have enough research and development going into antimicrobials to be able to offset the pace of antimicrobial resistance,” Claudia Martínez, director of research at the foundation, told POLITICO.

Only a handful of large pharmaceutical companies remain active in the field. Smaller biotech firms are increasingly stepping in, but they [face financial constraints](#). “They are constrained by limited access to capital and a lack of global reach,” Jayasree K. Iyer, CEO of the Access to Medicine Foundation, said in the report.

The report assessed 25 pharmaceutical companies — seven large research-based firms, 10 generic drugmakers, and eight small and medium-sized biotech companies.

Few new drugs, high stakes

The shrinking pipeline raises the stakes for the small number of antibiotics still in development — and whether patients in poorer countries will ever see them.

Out of 78 antimicrobial projects assessed, just seven stand out as particularly promising. They target some of the world's most dangerous drug-resistant pathogens, including multidrug-resistant tuberculosis.

The projects come from companies including GSK, Otsuka Pharmaceutical and Shionogi, as well as smaller biotech firms such as BioVersys, F2G, Innoviva and Venatorx Pharmaceuticals.

But innovation alone will not solve the problem.

Access to these medicines — particularly in low- and middle-income countries where resistant infections are often most deadly — remains uncertain. That's due regulatory barriers, unaffordable prices and a lack of sustainable government payment models.

"The jury is still out," Martínez said. "We need to see these projects making it into people's hands once they leave the pipeline."

Even thinner pipeline for children

The situation is even more acute for children.

Many antibiotics lack age-appropriate formulations or dosing, and only 10 percent of antibiotics introduced since 2000 carry a pediatric label, the report warns.

For children — particularly newborns — the challenge is not just discovering new drugs but adapting them to be safely used. Young patients often require special formulations, such as liquids that are easier to swallow or doses tailored to body weight.

"We do not have enough research and development happening for kids," Martínez said.

"There's also a big delay from the moment a company obtains approval for the adult formulation until the point where it becomes available for children," she added.

Commercial incentives also play a role. The market for pediatric antibiotics is smaller, and developing child-specific formulations often involves complex regulatory requirements and clinical trials.

Companies cannot do this alone

Part of the challenge is economic: antibiotics generate far less revenue than other medicines because their use must be limited to avoid fueling resistance.

To address this, governments are experimenting with new incentive models.

The EU recently approved a "transferable exclusivity voucher" as part of its [pharmaceutical legislation](#). This would reward developers of novel antimicrobials with an additional year of patent protection on another medicine in their portfolio. The voucher could also be sold to another company.

In the meantime, the National Health Service in the United Kingdom has launched a [subscription-style payment system](#) — often called the “Netflix model” — that pays companies for access to new antibiotics regardless of how much they are used.

For Martínez, such market incentives are essential to keep companies engaged in antibiotic research.

“The companies that remain engaged are absolutely critical,” she said. “We want more companies to hopefully go back into the playing field.”

This article has been updated.

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