



Targeted Effort Needed to Reinvigorate the Antibiotic Pipeline

June 16, 2016

Just weeks before our organizations gathered to discuss ways to advance the discovery of new and urgently needed antibiotics, the bacterial *mcr-1* gene was detected in the United States for the first time. The *mcr-1* gene makes bacteria resistant to colistin, one of our antibiotics of last resort, and one of the few medications that doctors can still turn to in fighting serious and life-threatening infections that are resistant to other treatment options.

It has become abundantly clear: we need new drugs and therapies to combat the growing threat of drug-resistant bacterial infections – and we need them now. But the pipeline for new antibiotics is dwindling. More alarmingly, nearly all of the antibiotics we have in our arsenal today are based on discoveries from more than 30 years ago.

We agree: the antibiotic pipeline is insufficient to meet current and future public health need.

Our organizations are working with a wide range of stakeholders, who are coming together in earnest to better understand and address the obstacles we face in the search for new antibiotics. For example:

- The Pew Charitable Trusts recently released its [Scientific Roadmap for Antibiotic Discovery](#), which identifies priority research goals and specific steps to break through the most significant barriers impeding antibiotic discovery and to pave the way for urgently new drugs.
- [Wellcome Trust](#) has been supporting antibiotic discovery and development through Seeding Drug Discovery awards for the past 10 years and is currently designing a strategic plan to maximize impact in the field.
- The American Society for Microbiology has played an active role in supporting policy decisions related to facilitating drug development and increased federal funding and is in the process of implementing an Antimicrobial Resistance Coalition, a multi-stakeholder mechanism to share information, analyze the current status, and identify relevant needs and opportunities for AMR across the microbial sciences.

However more needs to be done: we must find ways to retain expertise, develop more collaborative approaches to data and knowledge sharing that will advance the field, unblock bottlenecks to antibiotic discovery, and improve our understanding of the basic biological mechanisms that drive resistance. We must begin to implement a targeted effort to overcome scientific barriers to antibiotic discovery before it is too late.

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On June 16, 2016, The Pew Charitable Trusts, Wellcome, and the American Society for Microbiology brought together a group of leading experts to explore potential next steps for advancing antibiotic discovery. Findings from this discussion will be used to guide advocacy, and inform further action toward building the robust and sustainable antibiotic pipeline necessary to preserve public health.