



Accelerating the testing of new antibiotics

The Centers for Disease Control and Prevention (CDC) and HP aim to accelerate the testing of new antibiotics designed to fight antimicrobial resistant bacteria. New antibiotics for resistant bacteria can help save lives, but hospitals often do not have access to antimicrobial susceptibility testing to know if the new drug might be effective.

CDC will HP BioPrinters at Antibiotic Resistance (AR) Lab Network labs in New York, Minnesota, Tennessee and Wisconsin to develop antimicrobial susceptibility tests for new drugs for health departments and hospitals across the USA.

Antimicrobial resistance is an international public health issue. “Bacteria continuously develop new ways to resist antibiotics—once a drug is approved for use, the countdown begins until resistance emerges. In fact, resistance has even been detected before FDA approval,” said Jean Patel, PH.D. D (ABMM), Science Team Lead, Antibiotic Resistance Coordination and Strategy Unit at CDC.

“To save lives and protect people, it is vital to make technology accessible to hospital labs nationwide. We hope this pilot will help ensure our newest drugs last longer and put gold-standard lab results in healthcare providers’ hands faster,” Dr Patel says.

The BioPrinter dispenses or “prints” minute volumes, in the picoliters to microliters range, of small molecules and biomolecules in a few minutes.

Without testing, new drugs can be either overused, contributing to antimicrobial resistance, underused, not helping patients in need, or misused, which can lead to side effects or prolonged treatment.

CDC testing will begin in regional laboratories in the first quarter of 2019. CDC will prioritise testing for highly resistant bacteria, with pan-resistant bacteria the top priority. HP will coordinate with CDC to refine the system and explore and support a larger rollout of inkjet printing technology in labs nationwide.