

Speaker: Kevin Outterson
Executive Director, CARB-X
Professor of Law, Boston University

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When my granddaughter was born she had difficulty breathing and she had an infection. She was transferred quickly to Boston Children's Hospital.

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And for a couple of days in the NICU, we were preparing ourselves for the worst. But she took a powerful course of antibiotics and her infection cleared and her lungs recovered. Now she's just a happy, fully healthy

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and energetic student in kindergarten. Antibiotics are miracles. They not only treat bacterial infections, but they enable everything in modern medicine. They make surgeries, cancer treatments, organ transplants, and many things safer.

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Every year, 250M antibiotic prescriptions are used by Americans and billions more globally. But we are losing these life-saving drugs. Drug resistance destroys the antibiotics that we relied upon

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just five or 10 years ago. And the death toll keeps rising. Today, drug-resistant infections are estimated to kill over 1.2M people every year around the world.

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That's more deaths than from HIV/AIDS or malaria. Antimicrobial resistance is a serious top-tier health threat. And the world needs to wake up.

Speaker: woman's voice

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While the world needs these life-saving drugs, no new class of antibiotics has been launched in decades. Without profit, small companies have been filing for bankruptcy, and large pharmaceutical companies have shut down their antibiotic development. The future of antibiotics looked grim.

Speaker: Gary Disbrow, PhD
Chief of Research and Development, CARB-X

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In 2016, BARDA and our partners at NIAID and the Wellcome Trust catalyzed a public-private collaboration with Boston University called CARB-X.

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Together, we developed a platform to help spur antibacterial development and revive the then collapsed preclinical research and development space. And we are proud to support this program with our partners from the Wellcome Trust, the German and UK governments, the Bill & Melinda Gates Foundation and NIAID.

Speaker: Erin Duffy, PhD
Chief Research and Development, CARB-X

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Together, we support much-needed innovative products for patients. We take a comprehensive approach. The CDC and the WHO developed lists of resistant bacteria that pose the largest health threats.

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At CARB-X, we support new treatments that target these dangerous bacteria. We also support new and rapid diagnostics. Quick test results enable doctors to diagnose and prescribe effective drugs to save lives and slow the spread of resistance.

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We support vaccines and other preventatives because as we've learned with COVID, the best infections are the ones we never have.

Speaker: Cheryl Moore Gary
Director of Research Programmes, Wellcome

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CARB-X is revitalizing the world's AMR product pipeline by assisting product developers around the world, such as Bugworks, a small biotech in Bangalore, which is developing a novel first-in-class antibiotic that can kill multidrug-resistant Gram-negative bacteria.

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Another company in the CARB-X portfolio, Baebies, is working on a rapid test to accelerate the diagnosis and treatment of neonatal sepsis, a leading cause of death in infants, especially in lower- and middle-income countries.

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And we're deeply grateful for the work that the Jenner Institute is doing to produce an affordable vaccine for gonorrhea. These are just a few examples of the many developers that CARB-X has helped.

Speaker: Gary Disbrow, PhD
Director, BARDA

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Making a new antibacterial product is no easy task. Historically, it takes more than ten years of R&D and over \$1B to translate an idea into a drug that can be used by patients.

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Our funding will allow companies to access not just non-dilutive funding, but also a full suite of technical and business support, preparing them for advanced development to get them to the patients.

Speaker: Kevin Outterson
Executive Director, CARB-X
Professor of Law, Boston University

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In 2016, Lord Jim O'Neill's review on antimicrobial resistance ignited global efforts to address these threats. O'Neill estimated that the world needed four breakthrough antibiotic therapeutics approved by regulators every decade.

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If we start with more than 1,000 therapeutic projects, only 150 of those are estimated to make it to the hit-to-lead stage. Of those, we estimate about 20 projects would begin first-in-human studies and result in the four breakthrough antibiotic therapeutics that we need.

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CARB-X is one part of the solution, a key link in the chain of drug development that will eventually deliver life-saving products to every patient in need.

Speaker: Erin Duffy, PhD
Chief Research and Development, CARB-X

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It's important to say the CARB-X model is working. Since inception, 11 projects have begun or completed first-in-human studies. Furthermore, two rapid diagnostics have graduated the program, and are now available in Europe.

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Today, we are incredibly excited and grateful to announce new funding from BARDA and the Wellcome Trust. This funding will support the companies currently in our portfolio and hopefully new ones as well.

***Speaker: Kevin Outterson
Executive Director, CARB-X
Professor of Law, Boston University***

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CARB-X intends to do its part, partnering with all stakeholders in the preclinical and Phase 1 space to get closer to a world where no one dies needlessly from a bacterial infection.