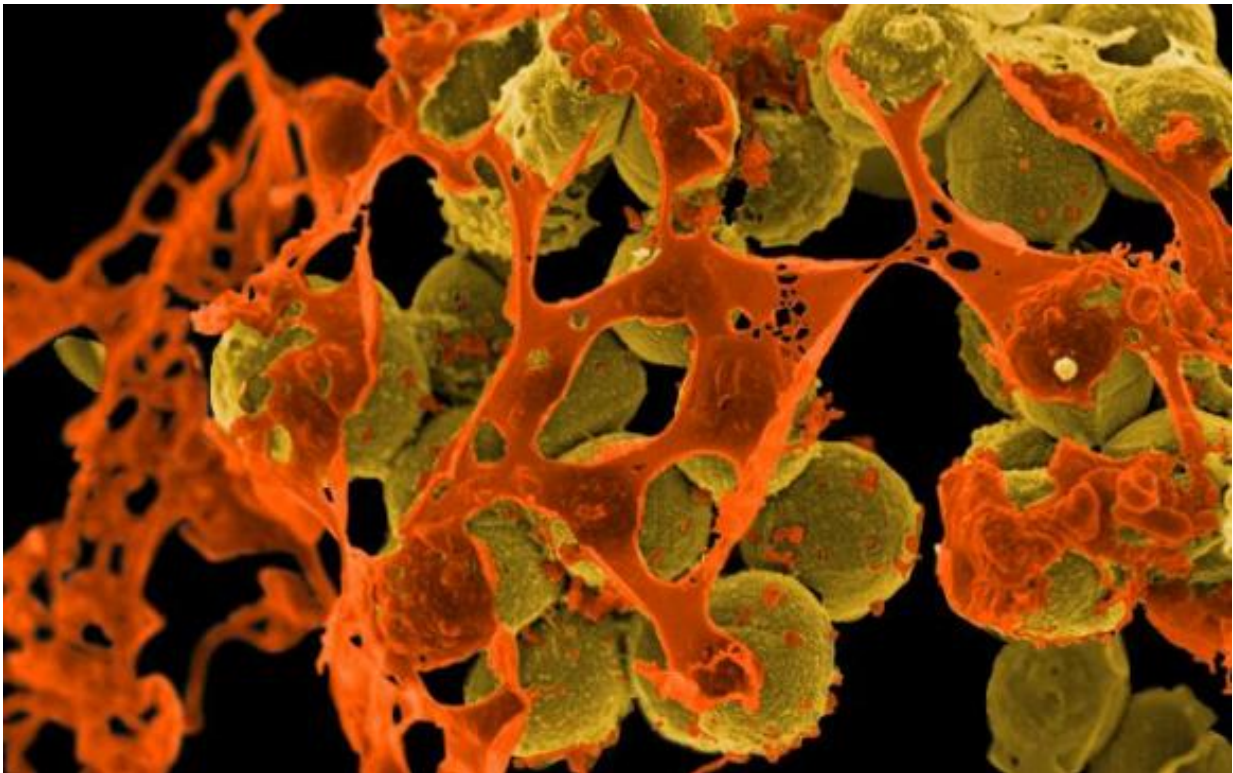


Drug industry to fight superbugs together with governments

January 21 2016, by Linda A. Johnson



Methicillin-resistant *Staphylococcus aureus*. Credit: NIH/NIAID

Dozens of makers of medicines and diagnostic tests have joined together in an unprecedented effort to tackle "superbugs"—infections that increasingly don't respond to drugs and threaten millions of people in countries rich and poor.

Altogether, 74 drugmakers, 11 makers of [diagnostic tests](#) and nine industry groups have signed a groundbreaking agreement to work with governments and each other to prevent and improve treatment of drug-resistant infections. They plan to announce the new agreement Thursday at the World Economic Forum in Davos, Switzerland.

The effort is sorely needed. Many common infections no longer respond to [conventional drugs](#), mainly due to overuse of [antibiotics](#), few new drugs to fight bacteria, viruses, parasites and fungi, and declining industry research in the field. A key factor driving those problems is the relatively low prices infection-fighting medicines bring, compared to many drugs patients take for years for chronic conditions.

Bacteria and other microbes can naturally develop resistance to drugs, particularly when patients don't take all of their prescriptions and the stronger microbes survive and multiply. Taking antibiotics for viruses and other nonbacterial infections also contributes to resistance. And widespread use of antibiotics to spur faster growth of livestock raised for food exacerbates the problem. Meanwhile, in poor countries, many people can't afford these medications and die unnecessarily.

With more and more bugs evolving to overcome infection-fighting drugs, by 2050 superbugs are expected to kill about 10 million people annually without major intervention. That's according to a recent analysis, called "The Review on Antimicrobial Resistance," commissioned in 2014 by the UK government. The analysis also forecasts global economic output will be reduced by a total of \$100 trillion by 2050.

Against that backdrop, [drug](#) and device makers and industry groups from 16 countries have signed the "Declaration on Combating Antimicrobial Resistance." It's the first statement on how government and industry should work together to prevent more [antimicrobial drugs](#) from

becoming ineffective, encourage development of [new drugs](#) and provide access to them for all those needing the medicines, regardless of their income or location.

"Antimicrobials are the backbone of modern medicine, and have played a key role in increasing life expectancy globally," Dr. Paul Stoffels, Johnson & Johnson's chief scientific officer, said in a statement. "For the world to continue to have new antibiotics, we need investments in basic science and novel incentive models for industry R&D, and to protect our existing treatments, we need new frameworks for appropriate use."

Other companies participating in the effort include companies making antimicrobial drugs and vaccines, such as GlaxoSmithKline PLC, Novartis AG and Pfizer Inc. They're joined by companies such as the Roche Group and Alere Inc. that make tests used to diagnose the specific type of infection a patient has. Those are crucial to ensure the patient gets the best treatment, rather than an antibiotic for an infection caused by a virus or other organism.

The declaration calls for steps including:

—governments committing funding to implement the World Health Organization's Global Action Plan to create programs ensuring that health systems use antibiotics appropriately, along with increasing use of fast diagnostic tests and boosting reimbursements for them to ensure patients get the correct treatment.

—better education of doctors and nurses on appropriate antibiotic use.

—improved infection control through better hygiene, vaccination and preventive treatments.

- reduced used of antibiotics in livestock.
- higher reimbursements for antibiotics and diagnostic tests in developed markets.
- more collaboration between researchers at drugmakers and those at universities and government.
- more access to antibiotics in countries around the world.

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