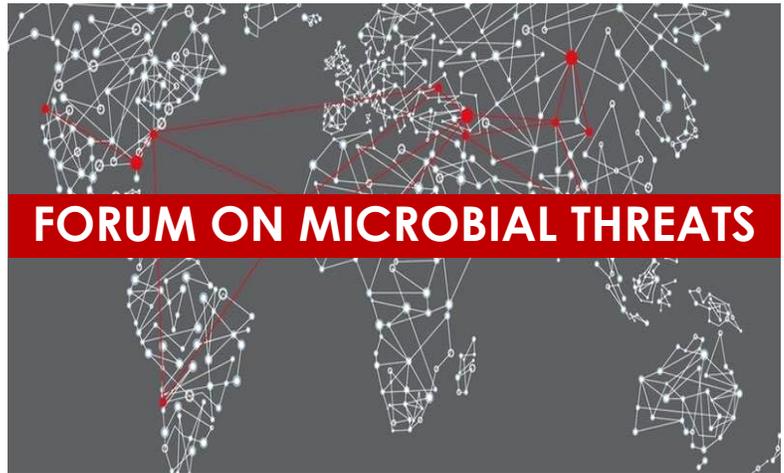


2017 YEAR IN REVIEW

The Forum on Microbial Threats was created in 1996 at the request of the U.S. Centers for Disease Control and Prevention and the National Institutes of Health to provide a structured opportunity for discussion and scrutiny of critical, and possibly contentious, scientific and policy issues related to research on and the prevention, detection, surveillance, and responses to emerging and reemerging infectious diseases in humans, plants, and animals, as well as the microbiome in health and disease. The Forum brings together leaders from government agencies, industry, academia, and non-profit and philanthropic organizations to facilitate cross-sector dialogue and collaboration through public debate and private consultation to stimulate original thinking about the most pressing issues across the spectrum of microbial threats.

Despite decades of progress, the need for the Forum on Microbial Threats remains. Problems such as MERS, Ebola, Chikungunya, Zika, yellow fever, and antibiotic resistance demonstrate how the issue of emerging infections is global and unrelenting. The drivers are ever more pervasive, and the consequences—human, social, and economic—loom larger than ever.

The Forum convenes several times each year to identify and discuss key problems and strategies in the area of microbial threats. To supplement the perspectives and expertise of its members, the Forum also holds public workshops to engage a wide range of experts, members of the public, and the policy community. All workshops are summarized in high-quality, scholarly workshop proceedings that are available for free download from the National Academies Press.



Peter Daszak, Chair



Kent Kester, Vice Chair



Mary Wilson, Vice Chair

MESSAGE FROM THE CHAIRS

We are pleased and honored to assume the leadership of the Forum on Microbial Threats. We thank our previous leaders, David Relman, Jim Hughes, and Lonnie King for creating a tradition of excellence and openness to new ideas and for building an impressive legacy and body of work reflected in workshop proceedings that have influenced across many disciplines.

The Forum offers a unique opportunity to focus on topics that are critically relevant now, and likely to grow in importance in the future. We explore them by drawing upon the best content experts globally and by spanning disciplinary divides. The Forum has a long history of breaking down intellectual barriers, identifying new interfaces, and creating novel synergies to tackle global threats to our health. At the same time, we strive to identify interventions and potential solutions that are innovative, practicable, and impactful.

We hope to have the creativity, breadth of vision, and boldness to continue expanding the Forum's impact, and look forward to working in this privileged environment that includes some of the foremost thinkers on emerging threats. We aim to maintain a global perspective, and one that integrates an understanding of plant, animal, human, and environmental health — a One Health approach and a global health outlook.

The Forum draws on the strength of its remarkable members, who bring rich, diverse experiences, broad disciplinary knowledge, and the capacity to think broadly and deeply. While we have conducted some remarkable work over the last two decades, we have an unfinished agenda, and face a rise in the frequency of emerging disease events, growing threats from antimicrobial resistance, and continued expansion of the underlying drivers of pandemics. We do not expect to solve all problems created by these microbial threats to health, but we will strive to shine a bright light on the ecological, socioeconomic, and demographic factors that underpin them. We look forward to this challenge and to the stimulating journey ahead.

A FOCUS ON ONE HEALTH

The **One Health Work Group** was launched on January 18, 2017, to engage a community of participants who are interested in contributing to a detailed ongoing exploration and information sharing related to One Health topics and accelerating the implementation of a One Health approach in the field. It is comprised of 15 members, including forum members and external stakeholders from multiple sectors and disciplines, and is led by forum member Jonna Mazet, as chair.

Seven work group discussions were held in the past year, including an in-person meeting that coincided with the Forum workshop on December 12. Discussions have touched upon a range of One Health topics based on participant interest: core competencies, workforce, economics, and zoonotic disease prioritization for the United States.

As this work group transitions into a **One Health Action Collaborative** in 2018, members will continue focusing on developing:

- ◆ A discussion paper examining One Health core competencies in academic programs in the United States.
- ◆ A discussion paper examining how One Health graduates are placed within the workforce and if this training addresses the needs for both trainees and employers.

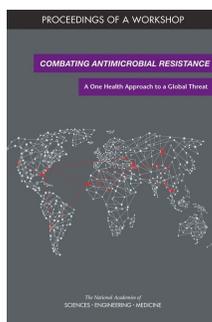
Stay tuned for their release!

FORUM ACTIVITIES IN 2017

JUNE 20-21: Combating Antimicrobial Resistance: A One Health Approach to a Global Threat

[Watch Webcast](#) // [Download Proceedings](#)

Major drivers of antimicrobial resistance in humans have been accelerated by inappropriate antimicrobial prescribing in health care practices; the inappropriate use of antimicrobials in livestock; and the promulgation of antibiotic resistance genes in the environment. To build on previous work, to explore developments since the last workshop was convened, and to help parlay knowledge into immediate action, the Forum hosted a 2-day public workshop that explored issues of antimicrobial resistance through the lens of One Health, which is a collaborative approach of multiple disciplines—working locally, nationally, and globally—for strengthening systems to counter infectious diseases and related issues that threaten human, animal, and environmental health, with an end point of improving global health and achieving gains in development.



*In less than 1 month since its public release, the workshop proceedings for “Combating Antimicrobial Resistance: A One Health Approach to a Global Threat” has been downloaded in **106** countries and **47** U.S. states, plus DC.*

DECEMBER 12-13: Urbanization and Slums: New Transmission Pathways of Infectious Diseases in the Built Environment

[Watch Webcast](#) // [Proceedings to be released in June 2018](#)

The Forum, in collaboration with the National Academies Board on Life Sciences, hosted a 1.5-day public workshop examining new transmission pathways of microbes in the urban built environment that affect human health. This workshop featured discussions on the social, physical, environmental, and political drivers of infectious disease transmission in an increasingly urban and interconnected world; effective interventions and policies to achieve sustainable, health-promoting urban built environments; and strategies to close the research gap and scale up successful practices.

44 external stakeholders convened in person and remotely across sectors, including urban planning, mechanical engineering, slum health, and infectious diseases to contribute to dynamic panel discussions and breakouts on priorities in research and potential next steps to advance the field.

UPCOMING FORUM ACTIVITIES IN 2018

“ Better appreciation of the role of the environment...and the need to engage with the environmental health and science communities more effectively. Breakout groups were an important contribution to thinking about short-term priorities. ”

- Participant feedback from June 2017

Combating Antimicrobial Resistance: A One Health Approach to a Global Threat workshop



January 30: A One Health Approach for Tackling Antimicrobial Resistance: Moving from Knowledge to Action — A Side Event for the Prince Mahidol Award Conference (PMAC) 2018 in Bangkok, Thailand

Building on the June 20-21 Forum workshop *Combating Antimicrobial Resistance: A One Health Approach to a Global Threat*, as well as the PMAC 2016 and 2017 side meetings on antimicrobial resistance, this closed meeting at PMAC 2018 will gather international experts across the One Health domains to further articulate a near term, action-oriented agenda to address AMR across multisectoral cross-cutting topics: 1) Surveillance under a One Health Approach; 2) Rational Use of Antimicrobials; and 3) Global Policy and Coordination. This event is being organized in collaboration with the U.S. Agency for International Development and Wellcome Trust.

Save the Dates for Our Workshops!

June 12-13: Understanding the Economics of Microbial Threats

Registration to open in April

Join the Forum for a 1.5-day public workshop that will examine the interaction of economic activity and microbial threats, including infectious disease outbreaks and antimicrobial resistance. The workshop will focus on the need for key metrics of risk and analytical tools to provide a comprehensive understanding of the economic risk that microbial threats pose. We will also explore approaches to incorporating estimates of infectious disease risk to overall macroeconomic assessments of economic growth in countries to incentivize actions that minimize these threats.



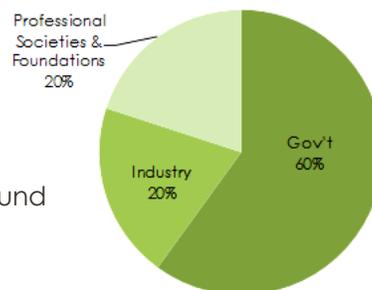
November 27-28: Readiness for Microbial Threats 2030

Stay tuned for developments on the workshop statement of task.



FORUM SPONSORS (as of December 2017)

- U.S. Agency for International Development
- U.S. Army Medical Research and Materiel Command
- U.S. Centers for Disease Control and Prevention
- U.S. Department of Homeland Security
- U.S. Department of Justice-Federal Bureau of Investigation
- U.S. Department of Veterans Affairs
- U.S. Food and Drug Administration
- U.S. National Institutes of Health
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***Members rotating off in 2018**