

**Outside Written Testimony for the record from the  
American Society for Microbiology  
FY 2021 Appropriations for the National Institutes of Health  
and the Centers for Disease Control and Prevention  
Subcommittee on Labor, Health and Human Services, Education and Related Agencies  
Committee on Appropriations, United States House of Representatives  
March 23, 2020**

Submitted on behalf of: Allen Segal, Public Policy and Advocacy Director,  
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The American Society for Microbiology (ASM) is the one of the largest life science societies, composed of more than 30,000 scientists and health professionals. Our mission is to promote and advance the microbial sciences. **ASM respectfully requests that Congress provide at least \$44.7 billion for the National Institutes of Health (NIH) and at least \$8.3 billion for the Centers for Disease Control and Prevention (CDC) in fiscal year (FY) 2021. Within the CDC budget, we call on Congress to provide \$57 million for the Advanced Molecular Detection (AMD) program in the National Center for Emerging and Zoonotic Infectious Diseases.**

**Maintaining a Strong Investment in Microbial Science through the NIH**

We thank the United States Congress for its longstanding, bipartisan support for the NIH and for its commitment to basic, translational, and clinical microbial research funded through multiple Institutes and Centers, particularly through the National Institute of Allergy and Infectious Diseases (NIAID). We especially thank House Appropriations Subcommittee on Labor, Health and Human Services (HHS), Education Chairwoman Rosa DeLauro and Ranking Member Tom Cole for their unwavering support for the NIH and leadership over the past five years, during which they and their Senate counterparts have worked in a bipartisan manner to place the NIH

budget back on path of meaningful growth above inflation. By increasing funding by more than 33% since FY 2015, NIH has advanced discovery toward promising therapies and diagnostics, reenergized existing and aspiring scientists nationwide, and restored hope for patients and their families. Continuing to provide robust, sustained and predictable funding for the NIH is the only way we will seize the unparalleled scientific opportunities in microbial research that lie before us, and the only way we will be equipped to address the demands that infectious disease outbreaks such as COVID-19 place on our public health infrastructure and the challenges they pose to our global health security.

### **NIH Funding has transformed the microbial sciences**

We live in an extraordinary time of scientific opportunity in the field of microbial research, and NIH funding plays a unique and indispensable role in supporting the discovery and application of new knowledge to prevent, detect, and treat infectious diseases. Amidst an unfolding, global pandemic, NIH funding has enabled the initiation of Phase 1 clinical trials in record speed to develop a vaccine for the novel coronavirus (SARS-COV-2). This funding also is facilitating the commencement of clinical trials to test antiviral drugs like Remdesivir on those who are infected with the virus in the hope that therapeutic options can be made available.

Investments in microbial research at NIH have led to great strides in protecting and improving human health. In addition to preparing today's scientists to combat our current pandemic, past NIH projects have led to the following advances: I:

- A young person diagnosed with Human Immunodeficiency Virus (HIV) today who receives treatment will have a near normal life expectancy. The AIDS death rate has dropped 80% from its peak in 1995.

- Routine childhood vaccinations prevent millions of cases of illness. For children vaccinated in 2009, an estimated \$82 billion in costs will be saved and 20 million cases, including 42,000 early deaths, will be prevented.
- The first preventive vaccine and experimental treatments were recently deployed in Africa against the Ebola virus, marking a significant public health achievement. The Ebola virus, which ravaged West Africa in 2013 and continues to cost lives in the Democratic Republic of the Congo, has killed more than 10,000 people and severely strained regional socioeconomic stability.
- The Human Microbiome Program (HMP) has transformed our understanding of the human/microbiome ecosystem by mapping the normal bacteria that live in and on the healthy human body. Microbiome research at NIH now extends well beyond the HMP to include research at several NIH Institutes, further revealing how microbial community makeup can vary from person-to-person and may correlate with health and disease. With a better understanding of what a “normal” human microbiome looks like, researchers are now exploring how changes in the microbiome are associated with, or even cause, illnesses.

**Looking ahead: Continued progress requires a sustained commitment to funding**

Even in the face of the promise and progress highlighted above, we are confronted with novel, emerging infectious disease threats such as SARS-COV-2. Novel diseases present tremendous health, economic and social challenges such as the COVID-19 pandemic we are experiencing today, but they also present opportunities for innovation and new developments. Seasonal flu continues to cost the U.S. billions annually in direct medical costs and lost productivity due to illness, not to mention thousands of Americans lose their lives to flu each year. Through

sustained funding to NIAID, scientists continue the quest for a universal flu vaccine, which will dramatically reduce the toll the virus takes on the U.S. each year, as well as reduce the chances of pandemic flu. In the past year, the first in human trials of a universal flu vaccine candidate were launched at the NIH Clinical Center.

### **CDC's indispensable role in preventing and controlling infectious disease**

The programs and activities supported by CDC are essential to protect the health of the American people. ASM appreciates the important increases that Congress provided for many CDC programs in FY 2020. Today's challenges reinforce the need for a strong CDC, and we urge Congress to build on these investments in FY 2021, including robust funding for the Prevention and Public Health Fund. CDC aids in surveillance, detection and prevention of global and domestic outbreaks from novel Coronavirus, to Ebola, to the measles, to seasonal flu. CDC is the nation's expert resource and response center, coordinating communications and action, and serving as the laboratory reference center. As we are seeing in real time during the COVID-19 emergency, states, communities, and international partners rely on CDC for accurate information, direction, and resources to ensure they continue to be prepared in a crisis or outbreak.

Three areas that ASM would like to highlight under CDC are: (1) advanced molecular detection technology; (2) antimicrobial resistance; and, (3) laboratory capacity.

- **The Advanced Molecular Detection (AMD) program** brings cutting edge genomic sequencing technology to the front lines of public health by harnessing the power of next-generation sequencing and high performance computing with bioinformatics and epidemiology expertise to study pathogens. Due to increasing costs and demands but

continued flat funding, the program's ability to support its mission is threatened. With additional funds, the AMD program can promote greater innovation, expand workforce development, and enter into productive partnerships with academic research institutions and state/local public health agencies. ASM requests \$57 million in for AMD FY 2021, in order for this program to fully achieve its potential.

- **Multiple programs support antimicrobial resistance**, which is one of the most daunting health challenges we face today. ASM requests funding for the Antibiotic Resistance Solutions Initiative at \$200 million, the National Healthcare Safety Network at \$25 million, and the Division of Global Health Protection at \$275 million will ensure that we have the resources across multiple programs to address this urgent public health challenge.
- **Support for laboratory capacity** is paramount, and the Emerging and Zoonotic Infectious Disease labs are the world's reference labs. But maintaining labs costs more each year, from quality and safety initiatives, to the cost of shipments and supplies, to recruiting and retaining specialized and highly trained staff. ASM applauds the inclusion of additional funding of to \$10 million in the President's FY 2021 request for lab capacity at the CDC, we urge you to consider this additional funding as a floor for additional resources to this area.

ASM looks forward to working with you to ensure that researchers and public health professionals have the resources they need to apply fundamental microbial science research to meet 21<sup>st</sup> Century challenges in public health promotion, the prevention, detection and treatment of infectious diseases, and the prevention of outbreaks.