

**Testimony Submission by Jamie Bay Nishi, Director, Global Health Technologies Coalition  
Prepared for the Subcommittee on Labor, Health and Human Services, and Education,  
and Related Agencies  
Addressing the Department of Health and Human Services**

On behalf of the Global Health Technologies Coalition (GHTC), a group of 30 nonprofit organizations, academic institutions, and aligned businesses advancing policies to accelerate the creation of new drugs, vaccines, diagnostics, and other tools that bring healthy lives within reach for all people, I am providing testimony on fiscal year (FY) 2021 appropriations for the National Institutes of Health (NIH), the Centers for Disease Control and Prevention (CDC), and the Biological Advanced Research and Development Authority (BARDA). My testimony reflects the needs expressed by our members working in nearly one hundred countries to develop new and improved technologies for the world's most pressing health issues. We appreciate the Committee's support for global health, particularly continued research and development (R&D) to advance new drugs, vaccines, diagnostics, and other tools for longstanding and emerging health challenges—like COVID-19. This pandemic has demonstrated again that R&D must be the tip of the spear of our response to global health emergencies and that innovation is our exit strategy from the economic and social crises spurred by the public health containment measures necessitated by our lack of effective tools. This reality holds across many everyday emergencies in global health—conditions affecting communities around the globe that cause suffering and death often absent from the headlines.

As the subcommittee considers FY 2021 appropriations in light of this crisis, **to accelerate progress towards life-saving tools for the full range of emerging and enduring global health threats, we respectfully request maintaining robust funding for NIH, particularly the National Institute for Allergy and Infectious Diseases (NIAID) and the Fogarty International Center; providing funding to match CDC's growing responsibilities in global health and global health security, at minimum level funding of \$570.8 million for the Center for Global Health (CGH) and \$635.8 million for the National Center for Emerging Zoonotic and Infectious Diseases (NCEZID); and supporting funding for BARDA's critical work in emerging infectious diseases.** GHTC members strongly believe that sustainable investment in R&D for a broad range of neglected diseases and health conditions is critical to tackling both longstanding and emerging global health challenges that impact people around the world and in the United States. This means investing *between* and *beneath* global health crises: both for rapid innovation for emerging infectious diseases when they strike and to enable continued progress on less visible but life-saving, decades-long efforts to combat persistent challenges like HIV/AIDS, tuberculosis (TB), and malaria.

Coordination is also key: We urge the Committee to request that leaders of the Department of Health and Human Services (HHS) agencies work with counterparts at the State Department and the United States Agency for International Development to develop a cross-government global health R&D strategy to ensure that US investments are efficient, coordinated, and streamlined. Operation Warp Speed is an audacious effort to combine the unique strengths of several US agencies, the US military, and private-sector partners with the goal of producing 300 million COVID-19 vaccine doses by January of next year. This unique whole-of-government effort to combat this global health emergency provides an inspiring model that could be replicated to dramatically accelerate progress against other persistent global health threats and leave us better prepared for the next health emergency.

With supplemental funding afforded in emergency COVID-19 relief bills, NIH, CDC, and BARDA have moved at historic speed to launch research partnerships and support product development to combat COVID-19. In just a few months, these agencies have begun advancing more than 50 innovations, including at least 20 diagnostics, 16 therapeutics, and 7 vaccine candidates. The pandemic has spurred an unprecedented scientific response, enabled by a US biomedical research infrastructure primed and ready to act thanks to a decade of historic investment by this subcommittee. These foundational investments have enabled products to be developed and rolled out much faster than in previous health emergencies. For example, it took researchers about five months to even identify the SARS virus after it was already spreading in 2003. COVID-19 was sequenced in just weeks with work on vaccines and diagnostics launched soon after. Our ability to mount this rapid response is a testament to the strengthening of our biomedical research infrastructure enabled by forward-thinking investment.

While COVID-19 demands our immediate attention and accelerated efforts, the everyday emergencies of persistent health threats continue to threaten communities around the globe. Though we have made tremendous gains in global health over the past fifteen years, millions of people around the world are still threatened by HIV/AIDS, TB, malaria, and other neglected diseases and conditions. In 2018, TB killed 1.5 million people, surpassing deaths from HIV/AIDS, while 1.7 million people were newly diagnosed with HIV. Nearly half the global population remains at risk for malaria, and drug-resistant strains are growing. Women and children remain the most vulnerable with around 80% of all global maternal and child deaths occurring in sub-Saharan Africa and 1 out of every 13 children in the region dying before the age of 5, often from vaccine-preventable and other communicable diseases. These figures highlight the tremendous global health challenges that remain and the need for sustained investment in global health R&D to deliver new tools to combat endemic and emerging threats. New tools and technologies are also critical to address challenges of drug resistance, outdated and toxic treatments, and difficulty administering current health technologies in poor, remote, and unstable settings.

The COVID-19 pandemic has demonstrated once again that we do not readily have all the tools needed to tackle many neglected and emerging infectious diseases—a reality brought into sharp focus during the Zika and West African Ebola epidemics just a few years ago. Yet, the impact of the rVSV-ZEBOV Ebola vaccine on the now-waning epidemic in the Democratic Republic of the Congo (DRC) demonstrates the power of having the right tool at the right time to respond to a health emergency. This new vaccine, developed with critical funding from NIH and other US government partners, is 97.5% effective—a game-changer for this and future outbreaks. As part of the rapid research response to COVID-19, the US government and global partners are leveraging past investments in R&D for other global health threats to advance innovations for COVID-19. For instance, a vaccine development platform originally developed to advance vaccine candidates for HIV/AIDS is being repurposed to develop COVID-19 vaccine candidates, and an emergency use authorization was recently granted to Remdesivir, a broad-spectrum antiviral compound originally developed as an Ebola and Marburg virus treatment that is now showing promise as a COVID-19 therapeutic. The United States is at the forefront of COVID-19 innovation today because of past investments in NIH, CDC, and BARDA.

**NIH:** The groundbreaking science conducted at NIH has long upheld US leadership in medical research. Within NIH, NIAID, the Office of AIDS Research, and the Fogarty International Center all play critical roles in developing new health technologies that save lives at home and around the world. Recent activities have led to the creation of new tools to combat

neglected diseases, including vaccines for dengue and trachoma, new drugs to treat malaria and TB, and multiple tools for Ebola. Leadership at NIH has long recognized the vital role the agency plays in global health R&D and has named global health as one of the agency's top five priorities.

Today, NIH is leading US R&D for COVID-19, supporting at least 17 vaccine, therapeutic, and diagnostic candidates, and, with emergency supplemental funding, rapidly identifying new candidates to support. Thanks to research investments in response to the SARS and MERS outbreaks, NIAID scientists and partners are better prepared to develop diagnostics, therapeutics, and vaccines for COVID-19. It remains critical that support for NIH considers all pressing areas of research—including research in neglected and emerging infectious diseases.

**CDC:** CDC also makes significant contributions to global health research, particularly through CGH and NCEZID. CDC's ability to respond to disease outbreaks is essential to protecting the health of citizens both at home and abroad, and the work of its scientists is vital to advancing the development of tools, technologies, and techniques to detect, prevent, and respond to urgent public health threats. Important recent global health contributions by NCEZID includes innovative technologies to provide a rapid diagnostic test for the Ebola virus, a new vaccine to improve rabies control, and a new diagnostic test for dengue virus. The center also plays a leading role in the National Strategy for Combating Antibiotic-Resistant Bacteria to prevent, detect, and control outbreaks of antibiotic-resistant pathogens, such as drug-resistant TB. NCEZID was instrumental in the development of the first COVID-19 diagnostic used in the US, and their Office of Advanced Molecular Detection is leading the SARS-CoV-2 Sequencing for Public Health Emergency Response, Epidemiology and Surveillance (SPHERES) initiative, a new national genomics consortium to coordinate SARS-CoV-2 sequencing across the country that will provide crucial information to track the spread of the virus and identify diagnostic and therapeutic product targets.

Programs at CDC's CGH—including the Divisions of Global HIV and TB, Global Immunization, Parasitic Diseases and Malaria, and Global Health Protection—have also yielded tremendous results in the development and refinement of vaccines, drugs, microbicides, and other tools to combat HIV/AIDS, TB, malaria, and neglected tropical diseases like leishmaniasis and dengue fever. CGH develops and validates innovative tools for use by US bilateral and multilateral global health programs and leads laboratory efforts to monitor and combat drug and insecticide resistance—functions essential to ensuring that global health programs are responsive, efficient, and tailored for maximum impact.

As global disease outbreaks have grown in frequency and intensity, CDC's work in novel technology development and global health security has only become more important. This includes the agency's efforts to quash the most recent Ebola outbreak in DRC through its international leadership on the Global Health Security Agenda (GHSA). GHSA supports the funding increase to the Division of Global Health Protection (DGHP) within CGH proposed by the Administration for FY21 and urges the Committee to continue annual increases to this and other accounts critical to global health security-related R&D. As shown through COVID-19 and the still-recent epidemics of Ebola and Zika, these functions are being called upon with greater frequency and are critical to protecting the health of Americans and the health of people around the world. CDC monitors 30 to 40 international public health threats each day, has identified disease outbreaks in over 150 countries, responded to over 2,000 public health emergencies, and discovered 12 previously unknown pathogens. We also urge increased funding for NCEZID, which supports DGHP's response efforts globally with laboratory expertise.

**BARDA:** BARDA plays an unmatched role in global health R&D by providing an integrated, systematic approach to the development and purchase of critical medical technologies for public health emergencies. By leveraging unique contracting authorities and targeted incentive mechanisms, BARDA partners with diverse stakeholders from industry, academia, and nonprofits to bridge the valley of death between basic research and advanced-stage product development for medical countermeasures—an area where more traditional US government research programs do not operate. With these unique assets, BARDA has played a vital role in the development of urgently needed countermeasures for pandemic influenza, antimicrobial resistance, and emerging infectious diseases (EIDs), like Ebola and Zika. Today, BARDA's unique strengths are on full display in its response to COVID-19. The agency has received supplemental resources many times its annual base appropriation to advance medical countermeasures for the pandemic, and is moving at unprecedented speed to use these resources to advance more than 30 products to diagnose, treat, and prevent COVID-19.

To date, BARDA's work in advancing tools to protect against the threat of EIDs has largely been supported through emergency funding, and today it is being forced to curtail critical work on a range of naturally occurring threats to focus on COVID-19. A dedicated funding line for EIDs would ensure that they are resourced for a wide range of future threats and would prevent delays like those seen between the onset of the COVID-19 pandemic and the first BARDA awards made with supplemental funding. In a public health emergency, science cannot wait, and we must ensure our research agencies have a funding pipeline ready to resource innovation for the next threat as soon as it is identified.

In addition to bringing lifesaving tools to those who need them most, investment in global health R&D is also a smart economic investment for the United States, **with 89 cents of every US dollar invested in global health R&D going directly to US-based researchers. US government investment in global health R&D between 2007 and 2015 generated an estimated 200,000 new jobs and \$33 billion in economic growth.** As the COVID-19 crisis is demonstrating, investments in global health R&D today can help achieve significant cost-savings and mitigate the economic impact of outbreaks in the future.

It bears repeating: innovation is our exit strategy for COVID-19 and we will not be safe from the pandemic in the United States until we end it everywhere. HHS research agencies advancing COVID-19 innovations should be encouraged to assess whether and how such products might be adapted for use in low-resource settings, where electricity is limited or delivery methods such as intravenous administration are not always feasible. Furthermore, as we continue to focus our immediate energies on combatting this global pandemic, we must also work to ensure that research on other critical global health issues is not sidelined indefinitely—investment will be needed to restart clinical trials, extend participant enrollment, and shore up critical research infrastructure through the eye of this storm and in the aftermath of this public health emergency.

At this time of crisis, Congress must make forward-thinking choices to respond to the emergency before us and draw on the painful lessons emerging from it to ensure that we are primed and ready for the next health threat—while also committing to continue progress against the full range of global health challenges. Global health research, which improves the lives of people around the world while supporting US interests and health security, creating jobs, and spurring economic growth, is a win-win investment.