OVERVIEW
Infectious diseases are a leading cause of morbidity and mortality worldwide. In addition to HIV/AIDS, tuberculosis, and malaria, close to 1 billion people globally are infected with a variety of worms and suffer from impaired development, stigma, and medical complications. These diseases have a disproportionate effect on the poor and underserved, and are to a large extent responsible for the disparate life expectancy between the developed world (80 years) and that of sub-Saharan Africa (46 years). In the United States, infectious diseases also affect the most disadvantaged populations, exacerbate poverty, and deepen disparities. Yet, although over 90% of the global burden of disease is in developing countries, only 10% of global research addresses many of these diseases.

THE CHALLENGE
To control infectious diseases, a pipeline of effective tools needs to be developed continuously. These include vaccines and drugs, prevention programs that focus on individual behavior and structural changes, and insecticides and biological insect control methods. Furthermore, scientific advances need to be translated into innovative tools that are affordable, culturally acceptable, and deliverable in resource-poor settings. To implement developed tools and effectively manage control programs, it is necessary to understand the ecological and social forces that shape and fuel the spread and maintenance of these infections. In addition, control programs have to be evaluated to effectively reduce the burden of disease and promote health and longevity for all people.

OUR RESPONSE
The Department of Epidemiology of Microbial Diseases seeks to develop a university-wide program, the Global Infectious Diseases Program (GIDP), which uses a public health framework to develop, implement, and evaluate innovative and interdisciplinary strategies based on cutting-edge research. This program will bring together Yale scientists across various disciplines who conduct research related to global infectious disease control. The mission of the GIDP is to:

- Strengthen and expand basic and clinical research and practice that contribute to reductions in the global burden of infectious disease incidence and the resulting mortality and morbidity
- Build global capacity to effectively implement and monitor the application of evidence-based interventions
• Take a lead role in Yale’s teaching mission at the undergraduate and graduate levels to train the next generation of global health scientists and practitioners

Building on our international training programs in China, Colombia, Russia, Uganda, and Kenya, we seek to continue to empower local scientists and build global capacity in relevant scientific disciplines to enable successful technology transfer. We will combine biomedical, environmental, evolutionary, and behavioral sciences to better understand the biology and ecology of disease agents, the activities and interactions of various hosts, the role of social structures, and physical environments that eventually affect human health.

WHAT WE HOPE TO ACHIEVE

The mission of GIDP is to save lives through:

**Partnerships**
- We are currently partnered with research centers in Colombia, Uganda, Kenya, Brazil, Russia, and China. School faculty work in over 40 countries and we seek to expand our programmatic collaborative global links by working with scientists from disease endemic countries so that cutting edge research findings can be effectively translated to the field in order to reduce disease.

**Interdisciplinary research**
- We will include leading basic and clinical scientists, as well as social and population scientists within and beyond the School of Public Health, who are engaged in the discovery, development, and delivery of interventions globally.

**Evidence-based interventions/evaluations**
- We are working to develop, evaluate, and disseminate interventions with proven effectiveness. Examples include expanding HIV interventions in Russia, improving the control of Human Sleeping Sickness in Uganda, developing a vaccine for leishmaniasis (a parasitic disease found in over 80 countries that can cause disfigurement and death), and controlling Lyme disease in the U.S.

**Training**
- We will continue to train the next generation of scientists, clinicians, and public health practitioners from throughout the University in infectious disease research and control. At the same time, we will expand our global training partnerships.

PARTNERSHIP FOR CHANGE

We will use the intellectual capital of this great University as a fulcrum to marshal the resources needed to meet the challenges of mounting effective responses to global infectious diseases. We will work closely with medical specialists, epidemiologists, geneticists, microbiologists, entomologists, immunologists, statisticians, ecologists, and evolutionary biologists. In addition to employing the resources within this University, a critical element of our strategy is to partner with institutions throughout the world.

To make a measurable, meaningful, and sustainable difference we need:
- Programmatic funds to support innovative pilot projects, cross-campus collaborations, seminars, and research retreats
- Support to strengthen the curriculum at Yale for undergraduate, graduate, and professional students with an interest in the control of global infectious diseases
- Financial support for pre- and post-doctoral students
- Funds for new faculty who will become the next generation of leading researchers
- Major support for professorial chairs in these areas of research so that the School and Yale can attract and retain the world’s brightest scholars

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