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# Investing in Global Health Research: Neglected Tropical Diseases

What are schistosomiasis, onchocerciasis, lymphatic filariasis, and American trypanosomiasis? They are a few of the tropical diseases that affect 1 billion people worldwide. Yet these diseases are largely overlooked by foreign assistance programs, the pharmaceutical industry, and most of the world. Collectively referred to as

"neglected tropical diseases," they are sometimes called "biblical diseases" because of their long history of stigma and poverty.

As these diseases and the communities they affect continue to be neglected, both lives and livelihoods are lost, and a cycle of poverty endures.

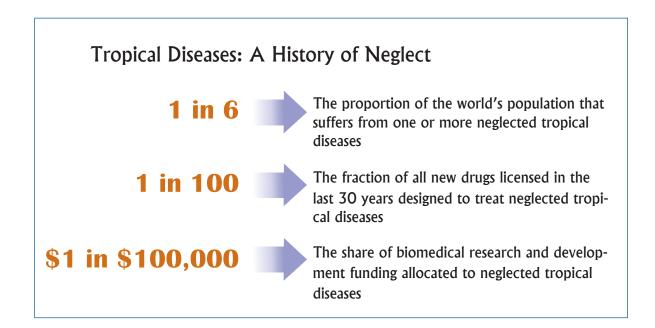
Most Americans know little about neglected tropical diseases. While some have familiar names, like "sleeping sickness," less is known about the scope of these illnesses or their economic costs. Fortunately, a modest investment by the U.S. can go a long way toward eliminating many of these diseases, which drain the world economy of billions of dollars every year.

#### Neglected Tropical Diseases Affect One in Six People

- Neglected tropical diseases affect one in six people worldwide and kill more than 500,000 people every year.<sup>1</sup> These illnesses continue their devastation unchecked because their victims are often poor, isolated, and lack the political clout necessary to influence the development of treatments and demand better health care services.
- These diseases exist where people are poor or have been displaced by conflict. Lack of housing, sanitation, and health services also contributes to their spread.
- Every year, these infections render millions of people weak, blind, disabled, and unable to participate at school or at work. For example, American trypanosomiasis (also known as Chagas disease) is a parasitic infection that affects 18 million people, mostly in Latin America. It costs the world economy a total of \$8 billion each year.<sup>2</sup>

## A Few of the Neglected Tropical Diseases:<sup>3</sup>

- **African trypanosomiasis** (Sleeping sickness): A parasite that affects the nervous system, resulting in wasting, coma, and death. Affects 500,000 people.
- American trypanosomiasis (Chagas disease): A parasitic infection that is common in Latin America and parts of the United States. It causes fever, swelling, and sometimes death. Affects 18 million people.
- **Lymphatic filariasis** (Elephantiasis): A parasitic infection that causes swelling and disfiguring of the legs, breasts, and genital area. Affects 120 million people.
- **Visceral leishmaniasis**: A parasitic disease that affects some internal organs, including the spleen, liver, and bone marrow. Most commonly found in India, Bangladesh, Nepal, Sudan, and Brazil. Affects 12 million people.



### **Can Tropical Diseases Be Eradicated?**

Despite the dire situation described above, eliminating neglected tropical diseases is indeed possible. Leprosy (also known as Hansen's disease) falls into a similar class of ill-nesses, yet 14.5 million people have been cured since 1991, when the international health community staged an assault on the disease using multi-drug therapy.<sup>4</sup> Like leprosy, the rest of these neglected diseases can be eliminated with additional funding for effective treatments. Modest investments in developing better diagnostic tools and more effective drugs can go a long way toward eliminating these devastating diseases.

In instances where treatments do exist for some neglected tropical diseases, more effort is needed to get those treatments out to the people who need them. It is estimated that, with \$400 million every year for the next five years, 500 million people could be cured of the diseases for which treatments currently exist.

There are some tropical diseases for which effective, safe treatments have yet to be developed. For these diseases, which include visceral leishmaniasis, chagas disease, and sleeping sickness, increased funding is critical to ensuring that we end their legacy of devastation.

#### What Is the United States Doing to Eradicate These Diseases?

In its 2006 budget, the United States pledged \$15 million for neglected diseases – that's just 1.5 cents per person who suffers from these diseases. We can do more. On just one day of the year, the 4th of July, the U.S. spends 10 times that amount on fireworks celebrations.<sup>7</sup>

Doing more would make a considerable difference. With existing tools, we could make significant inroads in treating and preventing neglected tropical diseases for \$400 million a year for the next five years. That amounts to just over \$1.33 a year for each person in the United States.

With more funding for better treatments and vaccines, and in partnership with the governments of other developed nations, the United States has the opportunity to bring about tangible, long-lasting change for millions of people at a relatively low cost.

<sup>&</sup>lt;sup>1</sup> World Health Organization (WHO), *Neglected Tropical Diseases: Hidden Successes, Emerging Opportunities* (Geneva: WHO, 2006).

<sup>&</sup>lt;sup>2</sup> Institute for One World Health, *The Global Burden of Infectious Disease* (San Francisco: Institute for One World Health, 2006).

<sup>&</sup>lt;sup>3</sup> Centers for Disease Control and Prevention (CDC), *Parasitic Disease Information*, available online at http://www.cdc.gov/ncidod/dpd/parasites/listing.htm, accessed on December 7, 2006.

<sup>&</sup>lt;sup>4</sup> World Health Organization (WHO), op. cit.

<sup>&</sup>lt;sup>5</sup> Ibid.

<sup>&</sup>lt;sup>6</sup> Global Health Council, *U.S. Foreign Assistance and Related International Health Programs*, available online at http://www.globalhealth.org/view\_top.php3?id=172, accessed on December 7, 2006.

<sup>&</sup>lt;sup>7</sup> Trisha O'Hehir, "Dental Whitening Revolution," Hygienetown Magazine (June 2006): 16-18.

<sup>&</sup>lt;sup>7</sup> United States Census Bureau, Facts for Features: The Fourth of July 2005 (Washington: U.S. Census Bureau, 2005).

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