

# AbbVie's Contribution to Combatting Neglected Tropical Diseases

**Neglected tropical diseases (NTDs) together with widespread diseases such as malaria and tuberculosis, impact more than one billion people globally.**<sup>1</sup> These diseases disproportionately affect people in low- and middle-income countries (LMICs) and are detrimental to both public health and the economic well-being of communities.

AbbVie was one of the original signatories to the [London Declaration on Neglected Tropical Diseases](#) in 2012. This collaborative global partnership among pharmaceutical companies, donors, endemic countries and nonprofit organizations aims to eliminate or control 10 NTDs.



Ending NTDs by 2030 has become a key sub-target for the United Nations' Sustainable Development Goal 3, Ensuring Good Health and Well-Being.

We donate our drug discovery and development expertise to collaborative projects working to address this need. Our work is focused on:

Disease	Our Partners
<p><b>Onchocerciasis (River Blindness):</b> An eye and skin disease caused by filaria (worms). It is transmitted to humans through flies that breed in fast-flowing streams and rivers and is the world's second leading infectious cause of blindness.<sup>2</sup></p>	<ul style="list-style-type: none"> <li>• Drugs for Neglected Disease Initiative (DNDi)</li> <li>• Liverpool School of Tropical Medicine</li> <li>• University Hospital of Bonn</li> </ul>
<p><b>Lymphatic filariasis (Elephantiasis):</b> A parasitic disease that causes infections in the human lymphatic system. The disease results in painful swelling that leads to severe pain and disability.<sup>3</sup></p>	
<p><b>Tuberculosis:</b> An airborne disease that can be spread by coughing or sneezing. The disease causes severe damage to the lungs or other parts of the body and is the leading infectious killer in the world.<sup>4</sup></p>	<p>Collaborating partners through the TB Drug Accelerator (TBDA):</p> <ul style="list-style-type: none"> <li>• TB Alliance</li> <li>• Infectious Disease Research Institute</li> <li>• Eli Lilly</li> <li>• Texas A&amp;M University</li> <li>• University of Dundee</li> <li>• University of Cape Town</li> </ul>
<p><b>Malaria:</b> A common life-threatening parasitic disease spread through mosquitoes that impacts nearly half the world's population.<sup>5</sup></p>	<ul style="list-style-type: none"> <li>• Medicines for Malaria Venture</li> </ul>
<p><b>Leishmaniasis:</b> A potentially fatal parasitic disease caused by various species of sandflies. The disease is prominent among the poorest people on earth and can result in malnutrition, population displacement and overall poor economic well-being of communities.<sup>6</sup></p>	<ul style="list-style-type: none"> <li>• DNDi</li> <li>• NTD Drug Discovery Booster Consortium</li> </ul>
<p><b>Chagas disease:</b> A parasitic disease that impacts an estimated eight million people, predominantly in Central and South America. It is known as the silent disease, as most people with the disease do not know they are infected.<sup>7</sup></p>	
<p><b>Cryptosporidiosis:</b> A diarrheal disease caused by microscopic parasites. It is one of the most common causes of waterborne diseases in humans in the U.S. and the leading cause of diarrheal disease globally.<sup>8</sup></p>	<ul style="list-style-type: none"> <li>• University of Washington Department of Global Health</li> </ul>
<p><b>Emerging pathogenic viral diseases:</b> A selection of new diseases, with few or no medical solutions, that can cause severe outbreaks in the near future.<sup>9</sup></p>	<ul style="list-style-type: none"> <li>• United States Army Medical Research Institute of Infectious Diseases (USAMRIID)</li> </ul>

# Our contributions

Hundreds of AbbVie scientists have donated thousands of pro bono hours to help find solutions for these persistent global public health challenges. Our work includes:



**Working with partners to advance new potential treatments.** AbbVie works alongside partners to conduct clinical trials that can lead to new treatments for NTDs.



**Serving as advisors and consultants.** AbbVie experts offer specialized skills to organizations. We provide:

- Technical support to partners on drug discovery and preclinical development
- Advisory input through Scientific Advisory Boards



**Working on partners' drug development projects.** Our teams help design the processes for making partners' development compounds and conduct preclinical and early clinical testing. We also run routine and specialized preclinical tests to gather valuable information on safety and toxicology.



**Sharing compounds for screening.** AbbVie has a vast library of chemical compounds that can be used in the early R&D process. We have provided our partners, such as DNDi and TBDA, pro bono access to over 100,000 compounds that can be screened for potential activity against target diseases.

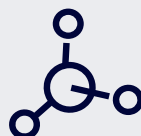
## Key highlights

As a result of this work, our team has contributed towards the [SDG sub-target 3.3](#):



Working with the Liverpool School of Tropical Medicine and the University of Bonn, AbbVie discovered a new compound to **potentially treat river blindness and elephantiasis**. The compound depletes a symbiotic bacteria inside the parasitic worms causing these diseases, sterilizing the adult female worms in order to interrupt transmission. In collaboration with DNDi, AbbVie has **advanced this compound through Phase 1 clinical trials. The results support progression to Phase 2.**

[Read more here](#) ▶



To assist TBDA and the TB Alliance's efforts on a new anti-tuberculosis compound, AbbVie process chemists **designed a new chemical synthesis method** that would use inexpensive and readily-available raw materials to make the process more cost-effective. This new chemical synthesis method led to a sevenfold reduction in cost of one key ingredient and a fourfold increase in yield.

[Read more here](#) ▶



# AbbVie Foundation's contributions

The AbbVie Foundation recognizes that combating NTDs requires input and commitment from a wide range of dedicated partners—and that real impact comes from collaboration.

The Foundation has supported organizations including MAP International, Sabin Vaccine Institute, Rice University's Baker Institute for Public Policy and Notre Dame's Initiative for Global Development as they build sustainable health care systems in particularly vulnerable communities. Foundation-supported programs leverage community health workers to encourage prevention, promote early detection, improve disease surveillance and mapping, and increase linkage to care.

## A partnership with MAP International to combat Chagas disease



Chagas disease is considered a priority issue in Bolivia due to its epidemiological burden and socioeconomic impact and the proven effectiveness of prevention and treatment strategies. 60% of Bolivia's population lives under the national poverty level. Chagas disease and other neglected tropical diseases are diseases of poverty that disproportionately affect vulnerable and underserved communities.

Since 2014, the AbbVie Foundation has partnered with MAP International in Bolivia to support a multi-faceted approach to Chagas disease prevention and management that includes community health worker training, health education, housing improvement, diagnosis and treatment support. This work has been an essential and effective element of the implementation of Bolivia's national Chagas strategy. MAP's long-standing relationship with program communities enables the design and operation of programs that both align with national standards and reflect local values and priorities to help create enduring local capacity enhancement and community well-being.

To date, the program has demonstrated measurable impact on Chagas disease knowledge, attitudes, practices and epidemiology. Screening, education, linkage to care and treatment have helped to reduce transmission. The program has successfully engaged municipal authorities in local activities to support enduring impact. Further, the program's promotion of women's group formation as an education channel has had a transformative impact on the social roles of women in program communities. These groups have become an important means for community self-organization and advocacy with impacts including and well beyond improved control of Chagas disease. This is critical as families work primarily in subsistence farming making less than \$1 per day. For example, in Morochata some women's groups have expanded activities to encompass economically productive initiatives, such as the production of handicrafts for sale in city markets. The program consistently demonstrates the local community and local authorities' capacity to increase leadership and implementation responsibly.



1 [https://www.who.int/neglected\\_diseases/news/treating-more-than-one-billion-people-2017/en/](https://www.who.int/neglected_diseases/news/treating-more-than-one-billion-people-2017/en/)

2 [https://www.who.int/blindness/partnerships/onchocerciasis\\_disease\\_information/en/](https://www.who.int/blindness/partnerships/onchocerciasis_disease_information/en/)

3 <https://www.who.int/news-room/fact-sheets/detail/lymphatic-filariasis>

4 <https://www.tb Alliance.org/why-new-tb-drugs/global-pandemic>

5 [https://www.cdc.gov/malaria/malaria\\_worldwide/impact.html](https://www.cdc.gov/malaria/malaria_worldwide/impact.html)

6 <https://www.who.int/news-room/fact-sheets/detail/leishmaniasis>

7 [http://www.infochagas.org/en\\_GB/cuales-son-los-sintomas](http://www.infochagas.org/en_GB/cuales-son-los-sintomas)

8 <https://www.cdc.gov/parasites/crypto/general-info.html>

9 <https://www.who.int/medicines/ebola-treatment/WHO-list-of-top-emerging-diseases/en/>