



Above Former U.S. President Jimmy Carter tries to comfort a 6-year-old girl at a hospital in Ghana as a Carter Center volunteer dresses her extremely painful Guinea worm wound.

## Decades of dedication to fighting disease

Founded by former U.S. President Jimmy Carter and his wife, Rosalynn, The Carter Center has led the Guinea Worm Eradication Program since the 1980s. With Guinea worm disease poised to be the second-ever human disease to be eradicated, Jimmy Carter and Dr. Donald R. Hopkins – the Center’s Vice President for Health Programs – talk about the fight against neglected tropical diseases.

### Creating Chemistry: What have been the biggest challenges in combating Guinea worm disease?

**President Jimmy Carter:** The lack of attention from the rich world. The first thing is for the rich world to be generous. The second challenge is that the people who have these diseases, living in the most isolated communities, have very little communication with their central governments, or access to the media.

**Dr. Donald R. Hopkins:** Early on – internationally and in the endemic countries – we had to contend with a lack of knowledge about Guinea worm disease and with apathy. Now, I’d say, the biggest challenges are the insecurity situations. We’ve got insecurity in four of the endemic countries, meaning helpers cannot safely travel to these areas: in Mali and some parts of Ethiopia, Chad and South Sudan.

### Are there any moments that have been marker points for you?

**Hopkins:** Absolutely. One of the most striking, looking back, was in February 2007 when I went with President Carter to Ghana, to the northern

town of Savelugu where they had an explosion of cases of Guinea worm disease. So we went up to this epicenter and there were at least 200 kids there crying, including infants, having their worms extracted – rolled up out of their bodies. It was just terrible to see. That was the worst moment that I recall in the Guinea worm fight. Some of the good moments have just been going into villages and seeing how people, in all of their material poverty, are so spiritually rich and so caring. I draw energy from that.

**Carter:** We’ve had very difficult problems in some countries. For instance in Ghana, we had Guinea worm down to just a few hundred cases. Then the government changed from Jerry Rawlings’ administration, which had addressed the disease as a top priority. The new government didn’t want to address it, which prevented their making progress for five or six years. But eventually they did, then we very quickly did away with the disease there. We have been happy every time we have done away with the disease in one village or in one entire country. We’ve also been very fortunate, not only in getting help from companies like BASF and

charitable organizations like the Bill & Melinda Gates Foundation. Some countries – Great Britain and the United Arab Emirates among them – have been very generous to The Carter Center. And President Barack Obama recently made a speech promising to give more to neglected tropical diseases.

### How important are contributions by the private sector?

**Hopkins:** Beside cash donations, the early contributions of the filter material and insecticides weren’t only important for their epidemiological impact. It also gave a kind of legitimacy, the fact that the private sector was willing to come forward. It gave encouragement to the endemic countries that these companies cared. And it made international agencies, ministries of health and others sit up and take notice. That was the political impact.

### What more needs to be done to control neglected tropical diseases?

**Hopkins:** A lot of these diseases could be better controlled, particularly now that we have drugs – even donated drugs – to combat river blindness, various intestinal parasites and other neglected

tropical diseases. So we have those drugs and we need to apply the lessons we’ve learned about the importance of health education and the value of village volunteers doing regular surveillance.

### Are there lessons you have learned from the Guinea Worm Eradication Program?

**Carter:** What I’ve learned is that as soon as these people in the villages are given the necessary help, the opportunity and the knowledge, they will do the work that’s required themselves. They are remarkably hardworking and enthusiastic.

**Hopkins:** I would also underscore the value of marshalling data in a way that motivates people. Let them see the impact of what they’ve done so far and – if you can – compare that to adjacent countries or districts to really get the competitive juices flowing.

### You have achieved a great deal over the past years – what have been the main driving factors?

**Hopkins:** We owe a lot to President Carter – he is driven, very detail-oriented and focused, and just inspiring. He has taken this cause on and he’s very, very tenacious. In the beginning, people weren’t paying attention to Guinea worm disease, either in the international community or the endemic countries themselves. President Carter got very important publicity about what we were doing. He was also very active in helping to raise money and in-kind donations, with the insecticide Abate® being the first big contribution in 1989. And he has been able to mobilize people, not just leaders at the international agencies and donor agencies. He visits countries, meets heads of state and ministers of health, as well as calling or writing them, and he goes out to villages. Mrs. Carter has also been very active, visiting the villages. Since President Carter is 17 years older than me, I have no basis for complaining of being tired or anything like that! He’s constantly saying, ‘Why don’t you call on me more?’

### What are your key goals for the coming years?

**Hopkins:** First, finish up with Guinea worm globally. Second, finish up with river blindness in the Americas and help promote the idea of eradicating it in Africa – which is now appearing more and more possible. So, there’s plenty to do.

### How long do you think it will be before Guinea worm disease is eradicated and how will you rank that among your life’s achievements?

**Carter:** We think within two years we will be through with Guinea worm. Its eradication would be one of the most gratifying things in my life, because it has affected so many people. It’s been one of the most challenging and long-lasting efforts I’ve ever made. I’d say it would even be equal to the Egypt-Israel Peace Treaty of 1979. ■



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## Rooting out the kissing bug

### How BASF is helping to control the insect that spreads Chagas disease

The “kissing bug” sounds harmless enough, but it is an insect whose bite can be dangerous, if not deadly. That is because it carries with it the parasite that causes Chagas, a disease that starts with swelling of the eyelids, fever and fatigue, but can lead to malnutrition, cardiac disorders and even heart failure. It is considered primarily to be a disease of poverty, but there have also been significant numbers of cases in Europe and the United States, caused by travel and blood transfusion.

*Triatoma infestans* – to give the insect its scientific name – is endemic in many areas in Latin America, where it is also known as *Vinchuca*. WHO estimates that 8 million people are affected by it here. One example is Chaco, a province in the remote north east of Argentina. Here, the small town of Concepción del Bermejo is home to around 10,000 people, many of whom live in extreme poverty with inadequate access to clean water, healthcare, education and decent housing. The incidence of Chagas has been high among adults and children, with many of the roughly 170 rural dwellings and a large number of the 1,900 urban homes infested by the blood-sucking insects.

Since 2010, BASF Argentina has been committed to the community-based project “Vamos por nuestro país” (Let’s go for our country) in this area. In cooperation with the National Chagas Disease Program of the Argentinian Ministry of Health, the project utilizes BASF’s existing knowledge and state-of-the-art technology to help control, monitor and treat the disease. “‘Vamos por nuestro país’ is different from other programs because it is sensitive to the needs of the people affected by Chagas. No one else meets those needs,” explains Marcelo Hoyos, technical marketing manager for BASF’s Pest Control Solutions business and one of the 50 BASF volunteers from different business units

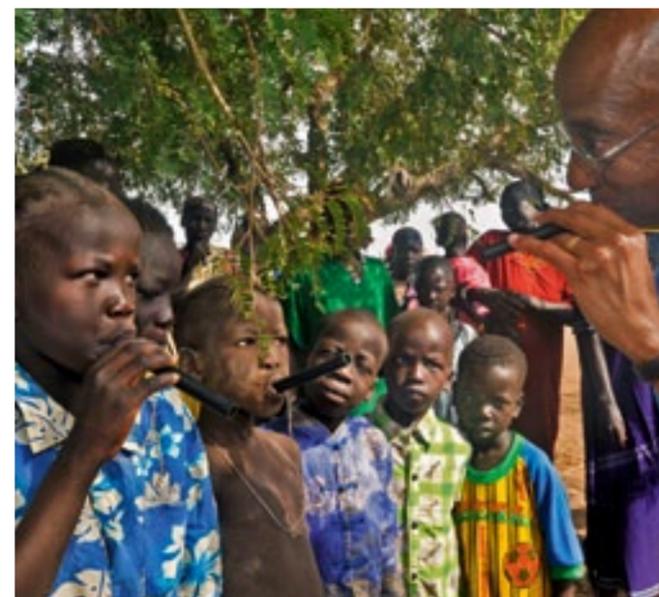
in Argentina who, together with their families, have committed to this project. As part of the three-year program, which has now been extended to run a further year until July 2014, BASF Argentina is not only supplying Fendona® – an insecticide which can safely be sprayed inside homes – it is also providing its expertise to the local authorities and local people.

A vital part of the program is to increase people’s understanding of Chagas, to encourage the proper use of medicines and the insecticide, and to foster active community engagement. A network of strategic partners has been created, including the regional government, institutions in the town such as the hospital and school, and Solidagro – an NGO specializing in local development. Training courses are run for local people explaining how to stop the bugs from breeding inside their homes and contaminating food and kitchen utensils.

An innovative online management system has been developed for monitoring progress and the knowledge gained is being exchanged with other municipalities, provincial authorities and NGOs to produce a joint study of best practices. The results so far have been encouraging. The proportion of infected houses in the rural area has been reduced from 17.9% in 2010 to 2.9% outdoor and 0% indoor infestation in 2013.

“Vamos por nuestro país” is a self-sustaining project that will permit continuity and outreach to other communities after BASF’s participation and can serve as a template for other programs tackling insect-borne diseases.

The experience of being involved in this award-winning project has had a huge impact, says BASF employee Hoyos. “We have seen that we can help people to help themselves and it has taught me to re-evaluate the importance of the family and education as the basis for improving the quality of life. But the battle has only just begun!”



Left Carter Center Vice President for Health Programs Dr. Donald R. Hopkins shows children in a village in South Sudan, where Guinea worm is endemic, how a pipe filter should be used in order to prevent infection.