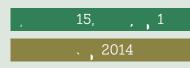
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#### The World Health

**Organization** (WHO) has verified that Colombia has eliminated the parasitic disease river blindness. Colombia is the first country in the Americas to eliminate the disease and the first country in the world to apply for and be granted verification of elimination of river blindness by WHO.

"Colombia has demonstrated the essential elements of a successful river blindness elimination program — hard work, community engagement, attention to detail and data, strong partnerships, and prolonged political commitment," said Dr. Mauricio Sauerbrey, director of the Carter Center's Onchocerciasis Elimination Program for the Americas (OEPA).

In June 2012, the Program Coordinating Committee of OEPA agreed that evidence

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showed onchocerciasis (river blindness) had been eliminated from Colombia. On Oct. 27, 2012, Colombia filed a formal application to continues on page 2

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On Nov. 10, 2013, the ceremonial 100 millionth dose of Zithromax,<sup>®</sup> donated by Pfizer Inc and distributed with Carter Center support, was given by Sister Zebideru Zewdie of the Amhara Regional Health Bureau to a high school student in Dangila town, Ethiopia. The recipient of the ceremonial dose of the sight-saving drug, Estubdink Addisu, was selected because she is an outstanding high school student who represents future prospects for education and development in *continues on page 6*  WHO for independent verification of elimination. In response to Colombia's request, a WHO-led team of international experts visited the country from Nov. 5–9, 2012, to extensively review the program and the data supporting onchocerciasis elimination. On April 5, 2013, based on the internal review of the verification team's report at WHO Geneva, Director-General Margaret Chan issued an official WHO letter of verification of elimination of onchocerciasis to the government of Colombia.

Colombian President Juan Manuel Santos accepted the WHO certificate during a celebration of the achievement sponsored by the Pan American Health Organization on July 29, 2013, in Bogotá. President Santos and former U.S. President Jimmy Carter both made remarks during the ceremony. Also in attendance were community residents from the formerly endemic area in Caucá state, Colombian Minister of Health and Social Protection Dr. Alejandro Gaviria Uribe, former U.S. First Lady Rosalynn Carter, and representatives from Colombia's National Institute of Health, The Carter Center, Merck/ MSD, Lions Clubs International Foundation, U.S. Agency for International Development, Bill & Melinda Gates Foundation, and other partners.

Colombia eliminated river blind-

Program for the Americas, and the Pan American Health Organization, with support from the Centers for Disease Control and Prevention and U.S. Agency for International Development. Country directors attended from the six originally endemic countries: Brazil, Colombia, Ecuador, Guatemala, Mexico, and Venezuela. Lions Clubs, a steadfast partner, were represented at IACO by two members of their Quito Central division: Ramiro Peña, president, and Margarita Garrido de Peña, director of the Women's Committee.

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### In Memoriam: K 1 1 0 0 4 1 1 1965–2013



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In his 13 years with the Carter Center's Nigeria office, Kal Alphonsus Miapyil waged a relentless war against the parasitic diseases of onchocerciasis, lymphatic filariasis, and schistosomiasis—in the field and in the laboratory.

Kal, as he was popularly called, was a dogged fighter against the ravages of parasitic diseases in Nigeria and the director of the most advanced neglected tropical disease laboratory in Nigeria. Whether conducting pyrethrum knockdown mosquito collections and nocturnal blood tests for lymphatic filariasis (LF) in remote villages or testing black fly vectors of river blindness using sophisticated statistics based on polymerase chain reaction testing, Kal's enthusiasm and determination never waned.

In his eulogy, Dr. Emmanuel Miri of The Carter Center described him as "an excellent scientist, quintessential team player, committed and dedicated." Kal's tenacity of purpose and ferocious dedication never slacked. The full story of LF and onchocerciasis transmission interruption in Plateau and Nasarawa states cannot be told without including the part he played.

Kal was a Carter Center co-author on six scientific papers: the last, published in *PLOS Neglected Tropical Diseases* and released on Oct. 31, 2013, after his death, was dedicated to his memory.

He has left a vacuum that will be difficult to fill, and everyone who knew him will miss him. We at The Carter Center were proud to have him in our fold.

Note: Kehinde Oyenekan, director of support services in the Carter Center's Nigeria office, provided the content for this article.

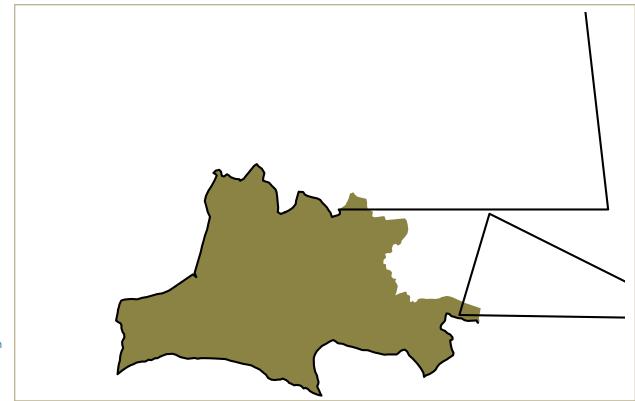
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At recent American Society of Tropical Medicine and Hygiene meetings, Dr. Darin Evans of The Carter Center reported data from a 2009 survey showing that treatments to fight river blindness could be stopped in parts of Nigeria co-endemic for both onchocerciasis (another name for river blindness) and lymphatic filariasis (LF), where mass drug administration has been given since the early 1990s.

Distribution of the medicine Mectizan® for onchocerciasis (donated by Merck) was launched in the Nigerian states of Plateau and Nasarawa in 1992. By 1996, mass drug administration had reached full coverage in the 12 targeted local government areas of the two states, which have a total population of 4 million.

Beginning in 2000, the drug albendazole (donated by GlaxoSmithKline) was added to these treatments to combat LF, which was co-endemic with onchocerciasis in these 12 local government areas and also endemic in the remaining 18 areas of the two states. By 2003, this drug combination reached all 30 areas, and in 2008, a survey was conducted to determine the status of LF transmission. This survey found that LF transmission had been interrupted in 10 of the 30 local government areas. In five of these, mass treatment was stopped. The remaining five, however, could not halt mass treatment because the status of onchocerciasis transmission was not known.

The 2009 survey was conducted in five local government areas to determine the status of river blindness transmission where LF transmission had been interrupted. The results showed a 97–99 percent reduction in onchocerciasis infection, based on



River Blindness

On Aug. 8, 2013, the sixth session of Uganda Onchocerciasis Elimination Expert Advisory Committee (UOEEAC) concluded that transmission of the disease has been interrupted in two more foci in the country. Chaired by professor Tom Unnasch of the University of South Florida, the committee recommended that mass drug administration with Mectizan®professwe disb18.64Universitn2013,

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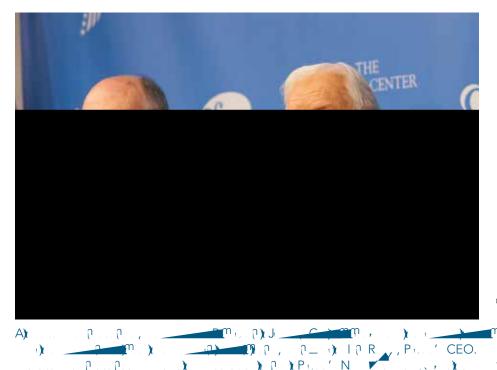
the country, free from the scourge of blinding trachoma. For her participation in the ceremony, Estubdink has been offered a scholarship to attend a university in Amhara, paid for by donations from the guests attending the event. She would like to attend the Bahir Dar Medical School so that she can one day serve her country as a physician.

The ceremony was attended by Sally Susman, executive vice president for corporate affairs of Pfizer Inc; Honorable Lion Dr. Tebebe Berhan, Lions Clubs International Foundation and the Ethiopia Lions; Dr. Paul Emerson, The Carter Center; and Dr. Mark Rosenberg, president of the Task Force for Global Health, in addition to many other guests from Pfizer and the International Trachoma Initiative (ITI) and dignitaries from the Ethiopia Federal Ministry of Health and Amhara region.

The ceremonial dose in Ethiopia was preceded by a visit by former U.S. President Jimmy Carter to meet with Pfizer CEO Ian Read at the company's New York headquarters. The New York event coincided with the 15th anniversary of the International Trachoma Initiative, in addition to the 100 millionth dose, and was broadcast live to Pfizer employees around the world. President Carter reminisced about a similar event in 2001 with the former CEO of Pfizer, Hank McKinnell, during which the company agreed to provide Zithromax® to The Carter Center to support work in Sudan.

Since the inception of the drug donation in 1998, The Carter Center has had a vibrant relationship with Pfizer and the International Trachoma Initiative. The program was able to expand in 2008, after principal





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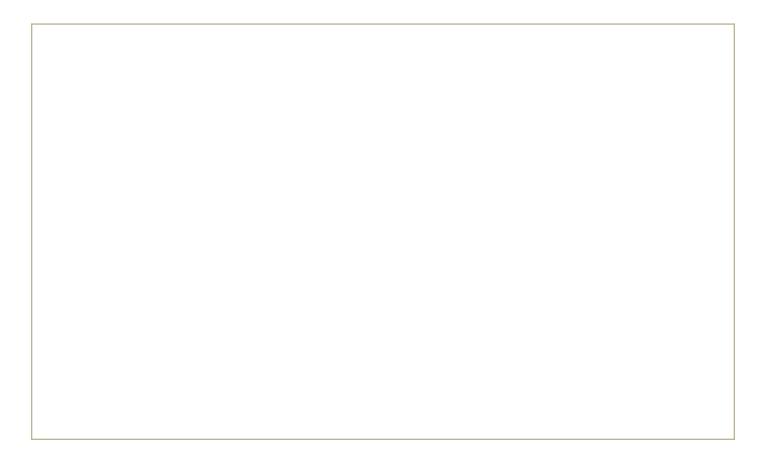
financial supporters the Conrad N. Hilton Foundation and Lions Clubs International Foundation agreed to provide support for the full spectrum of trachoma interventions, known as the SAFE strategy. Some 90 percent of the Zithromax distributed has been

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in partnership with the Lions-Carter Center SightFirst Initiative and the Amhara Regional Health Bureau in Ethiopia, and the rest has been used in Ghana, Mali, Niger, Nigeria, South Sudan, and Sudan.



antibiotics, facial cleanliness, and environmental improvements. The

protozoans indicates that water or food sources are being contaminated with human feces. The low frequency of hand washing containers outside latrines (5.7 percent of households) indicates that hand hygiene behavior has not been adequately adopted. Efforts are needed to improve hygiene behavior and use of improved water sources for drinking. Additionally, promotion of construction and use of household latrines must continue with behavior change efforts to prevent open defecation that, combined with mass drug administration, will reduce transmission of intestinal helminth infections.



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Editor's Note: This story is based on an interview with a Nigerien woman, Fatima, who received surgery for her trichiasis. Trichiasis is the most advanced stage of trachoma, in which a person's eyelashes scrape the cornea, causing severe pain with every blink. Fatima shared details about her life before. during, and after her surgery.

Fatima's face was creased from a lifetime of hard work, joy, and sorrow. Jokingly, she told us she was an old woman: "I am 130 years old," she said, her eyes gleaming with laughter. We asked her to tell us about her life, up to the point when she was diagnosed with trichiasis. "I had an ideal life. We lacked nothing," she began. She told of a happy and pious life with her family: "When we had animals and millet, if someone needed something to eat, I said just to go into my granary and take what was needed. In my lifetime, I never killed a sheep for Tabaski [the

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A July 2013 survey has shown that migrant farm workers in northwestern Ethiopia have a high burden of malaria and anemia.

In Ethiopia, peak farming periods from June through October overlap with the main malaria transmission season, and the farming districts of northwestern Ethiopia experience some of the most intense malaria transmission in the country. An estimated 300,000 migrant farm workers come to help with the harvest annually, which almost triples the typical resident population. Yet little is known about these migrant workers, including their migration patterns, living situation on the farms, access to and use of malaria prevention measures, and health-careseeking behaviors.

The survey was conducted by The Carter Center and the Amhara Regional Health Bureau in two agricultural districts of North Gondar zone. Coordinated by Dr. Neway Hiruy from The Carter Center and Emory student Rebekah Stewart Schicker, 615 workers were surveyed in a venue-based sampling methodology using handheld tablet computers with Swift Insights software developed by The Carter Center and the Georgia Institute of Technology.

Surveyed workers were mostly



young (mean age 22.8 years; range 18–65) and male (99 percent). Contrary to prior anecdotal reports suggesting that migrants came from widely dispersed areas, including from neighboring Sudan, this survey documented that 96 percent of migrants were from other parts of Amhara and, in particular, other districts within North Gondar zone.

The malaria prevalence among migrant workers as determined by rapid diagnostic test was 11.9 percent. This is significantly higher than the overall Amhara estimates of 2.6 percent, determined by the same test, in the 2011 Malaria Indicator Survey. Some 28.5 percent of workers were anemic.

Only 12 percent of participants had access to a bed net, but of those who did, 74 percent reported using the net on the previous night. In addition, 30 percent of participants reported suffering from a fever in the past two weeks, of whom 31 percent sought treatment. Some 53 percent of respondents indicated that their usual sleeping space on the farms was a temporary shelter, while 20 percent reported regularly sleeping outside at night — the time when malariacarrying *Anopheles* mosquitoes bite.

These results indicate a high burden of malaria among migrant farm workers in the area and low access to malaria prevention and treatment measures. The Carter Center is working with local officials to design and implement appropriate response measures to address the needs of migrant farm workers and the threat of malaria.



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