



medicine is ivermectin, also known as Mectizan, and it relieves symptoms and preserves sight. From the Western view, that's not hard. River blindness should be relatively easy to control.

Onchocerciasis experts say tremendous strides have been made in the fight against the disease and that the battle eventually will be won. Public health organizations target it for eradication in

the Americas and for control throughout Africa in the next 10 years.

"It's a wonderful success story," says Dr. Frank Richards, technical director of the river blindness program for the Carter Center, a nonprofit humanitarian

ADDIS ABABA, ETHIOPIA — Down by the Wanja River, naked boys swim through the swirling currents with whoops of joy.

Women scrub clothes at the water's edge, and farmers, men and women, chop weeds for hours on end.

Only tiny black flies disturb the peace. They bite, and some days the sounds of people slapping at insects can be heard throughout the lush river valley.

The infected flies spread the tropical scourge onchocerciasis.

And fear.

The disease, often called river blindness, starts with itching. It can get so severe that fingernails don't satisfy, and sufferers scrape off layers of skin with sticks and stones. The frantic urge to scratch is caused by parasites, tiny worms implanted under the skin by infected flies.

As the worms mature, the females grow up to 18 inches long. When they spawn, they produce millions of offspring, known as microfilariae. Some of them will migrate to the eyes.

Roughly 123 million people live in areas where the disease is endemic, which means they're at risk. Eighteen million people in 37 countries, most in Africa, wrestle with the itching, the mottled, leathery skin, the physical exhaustion, the social rejection that are part and parcel of the disease. About 500,000 suffer from low vision, and 270,000 have gone blind.

There is a solution—it's a couple of free tablets, taken once a year. The



“There’s no downside to keeping people from going blind or putting them back to work. I like that model. And I haven’t found a better use for money.”

—**JOHN MOORES, philanthropist**

Inside his stick house, a cow weighing close to 1,000 pounds takes up half the space.

Bitena explains that the cow is all they have; they can’t afford to lose it by keeping it outside.

Amarech, Bitena’s daughter, listens quietly.

She was in first grade when her itching started.

“My mom was taking care of me,” Amarech says. “Unfortunately, she died.”

Over the years, her skin has hardened and the color has darkened. Her vision is blurred.

“When I think about the future, I feel completely hopeless,” she says. “The Mectizan can’t give me a dramatic improvement. My vision can’t be restored. My skin is destroyed.

“I would have liked to be a doctor,” she says wistfully. “Maybe a government employee.”

Suddenly the problem that looks simple isn’t simple at all. Instead, it’s the story of Africa, dense and complicated.

In Africa, no problem stands alone. Money and muscle don’t talk the way they do in the West, and the successes that stick have to be engineered from the bottom up, by insiders, not from the top down, by outsiders.

“Hey, everybody wants to argue that the glass is half empty in Africa,” says Richards, objecting. “That’s the usual thing.”

Even he admits, however, that defeating river blindness sometimes seems like the tip of the hippopotamus’ ear.

A long list of problems bedevils Africa — gut-wrenching poverty, political upheaval, poor leadership, minimal public health care — and the list goes on. Richards and Dr. Donald Hopkins, associate executive director of health programs at the Carter Center, are well aware.

Keep pushing forward, Hopkins says. Diseases are conquered in Africa, and for that matter in the United States and

other developed countries, one step at a time. He adds that the knowledge gained in the battle against onchocerciasis will help in wars against Africa’s killing diseases — malaria, HIV/AIDS and tuberculosis.

“We’re lighting a candle in the dark,” Hopkins says. “In an imperfect world, on a troubled continent, it’s very important to do this work. We can’t allow ourselves to be paralyzed.”

In the lab

In 1975, Dr. William Campbell realized that ivermectin, medicine being testing to

FAST FACTS ON ETHIOPIA

Population: 73 million

First populated: Human fossil fragments date back 2 million years.

Life expectancy: 48

Capital: Addis Ababa

Government: Federal republic

Literacy rate: 42.7 percent of those 15 and older can read and write.

Languages: More than 80. The national language is Amharic.

Economy: Based on agriculture

Poverty rate: 50 percent

Exchange rates: birr per U.S. dollar — 8.76.

Origin of word Ethiopia: From Greek meaning “sunburned faces.”

Previous name: Abyssinia

LITTLE HOPE: Amarech Negash once hoped for a career and a family of her own. Now that she has river blindness, she has abandoned those plans.

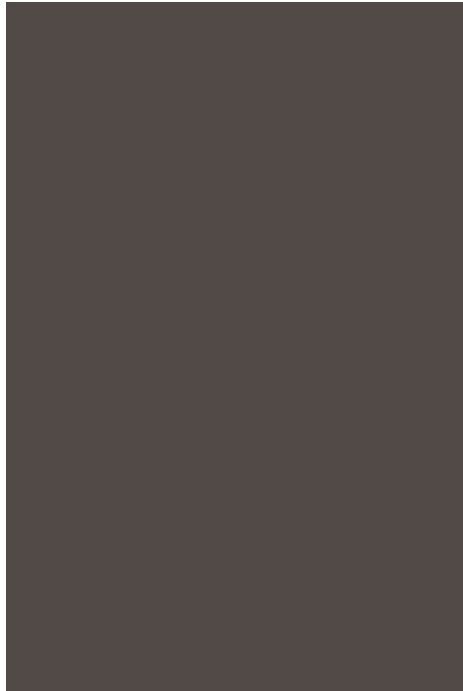
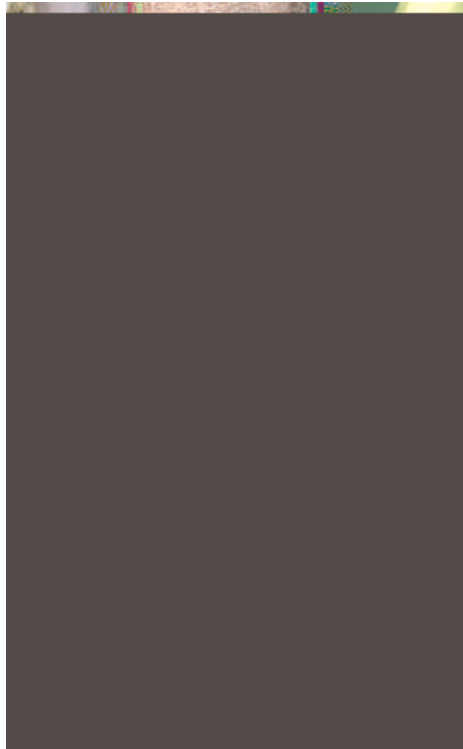
At present, 52 million treatments of Mectizan are administered every year. But, discounting the pregnant women and children under 5 who can’t take the drug, 50 million people still need to be treated. Others are treated too late.

Ethiopian Negash Bitena, 65, falls into that last category. He lives at the end of a long, muddy trail in the village of Tassano with two sons and a daughter.

He has river blindness. Before his wife died, she also suffered from the disease, and their 25-year-old daughter is afflicted as well.

In a deep and gravelly voice, he explains that river blindness dims his vision, drives him crazy with itching and saps his strength.

“I am miserable, as you can see,” he says.



“We persisted,” says Campbell. “Our drug turned out better than we could have hoped.”

Mectizan has proved to be safe and effective in killing the microfilariae, the baby worms that cause low vision and blindness. Taken annually, the tablets

relieve the intense itching and eliminate other parasites, though it does not reverse damage already done.

Mectizan’s main limitation is that it does not kill the adult worms. Patients must wait for them to die naturally, a process that can take 10 to 15 years.

Richards, with the Carter Center, still remembers the reaction to the drug and

THE CURE: Nurse Roman Addisu, left,

Merck’s 1987 pledge to donate it as long as needed. The gift, to date, is worth \$1.5 billion.

“People said, ‘Nice, but this isn’t what we want. Go back to the drawing board.’”

Richards says the naysayers missed the point. He compares Mectizan to flu shots. It would be nice if they offered life-long immunity, but a year’s protection is still invaluable.

“Take Mectizan,” he says. “You won’t go blind, and you won’t itch.”

A benefactor emerges

On Jan. 23, 1990, billionaire philanthropist and computer software guru John Moores lingered over his morning paper. The Houston Chronicle story that grabbed his attention featured University

States. He earned his master's degree from the University of New Mexico. He speaks English almost perfectly.

But his heart is in Africa. He, his wife and their children live in Addis Ababa, and he oversees the Carter Center health programs in Ethiopia.

When Carter and Moores visit, he takes them to meet the poorest of the poor, the people suffering from diseases targeted by the center.

On a sunny day in September, he takes a small group from Addis to Jimma. That's six hours, past donkeys stumbling under loads of hay, past women with baskets on their heads, past men carrying jugs of water balanced on poles on their shoulders. The landscape is impossibly green. The air is warm and heavy. It has just rained, and in a matter of hours it will rain again.

Half an hour past Jimma, the smooth roads give way to potholes and gravel. Every few miles there are villages, each one poorer than the last.

Houses and businesses are made of sticks and mud. There's no running water, few signs of latrines and no electricity.

On the road, cows, goats and sheep bleat and bellow for the right of way



Even to visit the toilet I need help.”

She’s had two doses of Mectizan, given after the worms had wrought their damage.

Her voice is low, dejected. “I used to be independent and go where I liked.”

She thinks long and hard when asked if she has hope for the future. Finally she says, “I hope my eyes will be opened, and I can see the light.”

The public health officials know that’s not going to happen. They flinch.

Around the corner is Momina Abadura. She is 30, a wife, a mother of five, a farmer as Abafogi had been.

Abadura still has her sight, her energy.

She looks barely scathed by the disease until she goes behind the clinic and raises her dress. The skin from her shoulders to her buttocks is rough and leathery, and she has multiple scars from scratching.

“My husband is sympathetic,” she says, “but mostly I don’t talk about it. I’m embarrassed, ashamed. People might point their fingers.”

She’s right. Villagers often treat river blindness sufferers as if they are contagious, contemptible.

Shaken, Gebre and Abdo climb back into SUVs—regular cars wouldn’t make it on this treacherous road—and head for the clinic in Kenteri. Again there is a long line of onchocerciasis sufferers. One invites Gebre and Abdo to his home.

It’s just across

