

NEWS RELEASE

\$8 million grant aids effort to eliminate elephantiasis

Major study of 3-drug treatment regimen funded by Bill & Melinda Gates Foundation

by **Kristina Sauerwein** • October 12, 2016



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A woman in India suffers severe swelling in her legs due to elephantiasis, a tropical disease. Researchers at Washington University School of Medicine in St. Louis have received an \$8 million grant to work toward eliminating the parasitic condition.

Washington University School of Medicine in St. Louis has received a two-year, \$8 million grant from the Bill & Melinda Gates Foundation to evaluate an investigational treatment regimen for lymphatic filariasis, a neglected tropical disease.

More than 1 billion people in 73 countries in tropical and subtropical regions live at risk of lymphatic filariasis, which is a major cause of disability. Without effective treatment, the infection can lead to massive swelling and deformity of the legs, known as elephantiasis.

The new grant supports a team led by Gary Weil, MD, a professor of medicine and of molecular microbiology. Weil has studied lymphatic filariasis — which is caused by parasitic worms and spread by mosquitoes — for decades. His earlier research led to a new diagnostic test for the disease. Weil also has been instrumental in evaluating drug treatments to end transmission of lymphatic filariasis.

Efforts to eliminate lymphatic filariasis have focused on massive treatment programs that involve administering medications to people living in areas where the disease is endemic, as a means of curing current infections and preventing new ones.

The World Health Organization (WHO) coordinates the Global Program to Eliminate Lymphatic Filariasis, which treats some 500 million people each year with a single oral dose of one of the approved two-drug regimens. People in regions with lymphatic filariasis typically require treatment annually for five to seven years to reduce infection rates to levels that no longer support transmission of the disease by mosquitoes.

The grant will fund multicenter studies of an investigational triple-drug treatment — ivermectin, diethylcarbamazine and albendazole, also known as IDA. The community-based studies will enroll more than 30,000 people.

Recent clinical trials have shown that the three-drug regimen is more effective than the currently used two-drug regimens of diethylcarbamazine plus albendazole, or ivermectin plus albendazole. However, more information is needed on the safety and effectiveness before it can be approved for widespread use by WHO and other public-health entities.

“People in the global filariasis community are very excited about the potential of IDA treatment, and we will do our best to complete the studies carefully and quickly,” Weil said. “This new treatment not only appears to be more effective at clearing the infection, but it also may only need to be given once while the two-drug treatments need to be repeated for many years.”

“If our studies confirm the safety and effectiveness of the triple-drug regimen, the treatment could be a game changer in accelerating the global program to eliminate lymphatic filariasis in the developing world,” Weil added.

The new grant will fund field studies in Haiti, Papua New Guinea, Indonesia and Ivory Coast, and will partially fund parallel studies in Fiji and India. Washington University will oversee the studies and collaborate with scientists at Case Western Reserve University and elsewhere to carry out the work.

“While we have made great strides in many countries, lymphatic filariasis remains pervasive in many impoverished countries in Africa and Asia, where it causes incredible suffering and disability,” Weil said. “A one-time treatment strategy has the potential to have a transformative impact on our efforts to eliminate the disease and could go a long way toward reaching our goal of eliminating lymphatic filariasis by 2020.”

Washington University School of Medicine’s 2,100 employed and volunteer faculty physicians also are the medical staff of Barnes-Jewish and St. Louis Children’s hospitals. The School of Medicine is one of the leading medical research, teaching and patient-care institutions in the nation, currently ranked sixth in the nation by U.S. News & World Report. Through its affiliations with Barnes-Jewish and St. Louis Children’s hospitals, the School of Medicine is linked to BJC HealthCare.

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