

Study shows that African eye worm threatens elimination of river blindness

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A doctor examines a man with African Eye Worm in Uma, Democratic Republic of Congo, where river blindness control programmes have met huge barriers because of the prevalence of both diseases Credit: Neil Brandvold-DNDi

Efforts to eliminate river blindness, a debilitating disease affecting

millions in Africa, will be hampered by another parasitic infection known as Loiasis, or 'African eye worm,' according to a study published in *Clinical Infectious Diseases*.

While the World Health Organization (WHO) has targeted the elimination of [river blindness](#) in most African countries by 2025, researchers from Erasmus MC, University Medical Center Rotterdam in the Netherlands and the Drugs for Neglected Diseases *initiative* (DNDi) have estimated that over 4 million people in West and Central Africa will still be infected with the disease in 2025 in areas where African eye worm is endemic.

In their modelling study, the researchers also found that 90% of these people will live in areas currently not covered by treatment programmes for river blindness, posing a major challenge to the elimination of this disease.

River blindness is transmitted by the bite of an infected blackfly and causes severe itching, skin lesions, and eventually blindness. African eye worm gets its name from its most infamous tell-tale sign: the visible passing of the Loa loa worm through the eye. Individuals with a very high amount of Loa loa larvae (microfilariae) in the blood are at risk of life-threatening complications if they receive ivermectin, a drug for river blindness.

Mass drug administration programmes of ivermectin need to be repeated for 10-12 years or more, as these treatments only kill the juvenile filarial worms that cause river blindness, and adult worms can live more than 10 years in the human body. Because of the risk of dangerous side effects, ivermectin cannot be safely used in areas co-endemic for river blindness and African eye worm and mass drug administration programmes have not been started in some of these areas.

'The current approach to preventing river blindness based on mass drug administration of ivermectin has been extraordinarily successful,' says Sabine Specht, Head of Filarial Clinical Programme at *DNDi*. 'But this study supports that alternative treatment strategies will be needed if we want to eliminate the disease, including the development of entirely new tools that offer a rapid and safe cure for river blindness.'

DNDi aims to develop a safe, effective, affordable, and field-adapted 'macrofilaricidal' [drug](#) that can kill adult filarial [worms](#) and be used for individual patient treatment and to support the elimination of river [blindness](#) in Africa in areas that are difficult to treat.

Provided by Drugs for Neglected Diseases Initiative

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