

Smelly socks could be a key to preventing malaria deaths in the developing world

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Grand Challenges Canada announces a grant today to support further development of a new innovative device to attract and kill mosquitoes that can transmit malaria.

Developed by Dr. Fredros Okumu (Ifakara Health Institute, Tanzania), the device is placed outside the home and is the outdoor complement to [bed nets](#) and sprays which protect people from infection in their homes.

"Despite global progress in the fight against malaria, there is still work to be done," said Dr. Fredros Okumu, Ifakara Health Institute. "Malaria has claimed so many lives, including those of people close to me, and my hope is that this innovative device will be part of the solution."

The scientific team at Ifakara Health Institute has learned that the most effective way to attract [mosquitoes](#) to the device is the [odour](#) of [smelly socks](#) or similar smelling synthetic bait developed at the Institute. Both the socks and the bait are highly effective and attract four times more mosquitoes than a human being does. Once the mosquitoes are in the device, they are trapped or poisoned and left to die.

"Each year, there are almost 250 million new cases of malaria; almost 800,000 people die, and most of those deaths are children," says Dr. Peter A. Singer, Chief Executive Officer of Grand Challenges Canada. "This local Tanzanian innovation could contribute significantly to accelerating the elimination of malaria and save lives. Grand Challenges Canada is pleased to support Dr. Okumu's important discovery and

further optimize this device, test its potential for impact and if successful identify a path to further development and [commercialization](#) to ensure the device is available to communities at a low cost."

"Through a lifetime of hard lessons, I know that discovery is not enough," said Joseph L. Rotman, the philanthropist and businessman who Chairs Grand Challenges Canada's Board of Directors. "Discoveries also need to be implemented in the real world through business and social innovation."

This initiative is a demonstration of Grand Challenges Canada's Integrated Innovation approach. Integrated Innovation is the coordinated application of scientific/technological, social and business innovation to develop solutions to complex challenges. Through this approach, the discovery has an improved opportunity of going to scale so that many more people benefit from the innovation.

Dr. Okumu's grant, funded jointly by Grand Challenges Canada and the Bill & Melinda Gates Foundation, will support research into testing and improving the device with the expectation it will be developed by the community in two years. Dr. Okumu's grant is one of twelve Grand Challenges Explorations Phase II grants announced today by the Gates Foundation.

"Grand Challenges Canada is a key partner in our effort to catalyze innovative scientific thinking and to encourage others to join in this effort," said Chris Wilson, the director of the Global Health Discovery program at the Gates Foundation. "Partnerships like this one will be critical in turning innovative ideas and early-stage research into new solutions for those most in need."

Grand Challenges Canada is funded by Canada's foreign aid budget. Canada is the first country in the world to take a grand challenges

approach to international development.

The money to fund this Grand Challenges Canada grant comes from the Development Innovation Fund. In Budget 2008, the Government of Canada committed \$225 million CAD over five years to the Development Innovation Fund, to support the best minds in the world in a collaborative search for solutions to global health challenges.

Provided by McLaughlin-Rotman Centre for Global Health

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