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## 'Mosquito-borne pandemic could wipe out 10m people'

By Chukwuma Muanya, Assistant Editor | 03 July 2017 | 4:40 am



*Mosquito...A deadly mosquito-borne pandemic poses a greater threat to humankind than global war, billionaire Bill Gates warns.*

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A deadly mosquito-borne pandemic poses a greater threat to humankind than global war, billionaire Bill Gates warns.

In a hard-hitting new documentary, the world's richest man said a killer bug could wipe out 10 million people without warning.

Footage seen by DailyMailUK Online, set to be aired this Thursday week, shows the philanthropist's worries towards the danger of disease-carrying mosquitos.

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Climate change warming the planet is allowing for mosquitos to spread from their usual habitats, posing a risk to many in the northern hemisphere.

While growing populations in these dense areas and the increasing ease of global travel mean the danger of a pandemic looms large if a virus was to break out – of which the likelihood is growing.

Bill Gates' latest comments come just months after the Microsoft founder announced details of a major project to tackle the Zika virus. On behalf of the Bill and Melinda Gates Foundation, he donated £14.5 million to find a cure to the most recent threat to humanity.

The tropical virus has the ability to infect more than two billion people in total before it dies out completely, statisticians predict.

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The threat is heightened by the lack of resources available to fight a fatal outbreak that could spread around the world at lightning speed, he said.

Speaking on the documentary, titled Mosquito, Mr. Gates said millions are adamant such outbreaks only occur in third-world countries.

He said: “At the top of the list of things I worry about, the risk of a very serious pandemic is quite substantial.

“If you say what could kill 10 million people – yes a war could, but a pandemic is probably even more likely to come and surprise us in that way.”

The documentary, which will be broadcast on the Discovery Channel, looked into the recent Zika virus epidemic that struck more than 70 countries.

Researchers on the programme also warned of the danger of dengue virus, known to be spreading rapidly throughout the world.

The plight of millions of children in Africa, where malaria is rife and kills two people each minute, was also touched upon.

All of the above viruses, and others including the West Nile and Chikungunya, pose a similar threat to humanity, the documentary warns.

Each has the ability to “spread like wildfire” – something that was unthinkable 20 years ago, said Dr. Bart Knols, who has devoted his career to the study of mosquitoes.

Disease-carrying mosquitos kill more than 750,000 people a year, many of whom being children, global figures have shown.

Gates’ comments come as a stark warning, especially seeing as the 61-year-old has previously said bio-terrorism could wipe out 30 million.

Meanwhile, scientists at University of California (UC) Berkeley and UC Riverside, United States (U.S.) have demonstrated a way to edit the genome of disease-carrying mosquitoes that brings us closer to suppressing them on a continental scale.

The study used CRISPR/Cas9 gene-editing technology to insert and spread genes designed to suppress wild insects, while at the same time avoiding the resistance to these efforts that evolution would typically favor. The proof-of-concept study was demonstrated in fruit flies; but the researchers believe this technology could be used in mosquitoes to help fight malaria and other mosquito-borne diseases in the next decade, pending public and regulatory approval.

“What we showed is that, if you disrupt a gene required for fertility in female mosquitoes at multiple sites all at once, it becomes much harder for the population to evolve around that disruption. As a result, you can suppress a much larger population. It’s much the same as combination drug therapy; but for CRISPR-based gene drive,” said John Marshall, the study’s lead author and an assistant professor of biostatistics and epidemiology at the UC Berkeley School of Public Health.

The article was published recently in the journal Nature Scientific Reports.

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