Scientists at James Cook University’s Cairns campus are leading a global effort to wipe out dengue fever by infecting the Aedes aegypti mosquito with an age-limiting virus. The work is moving close to a breakthrough thanks to a world-first control facility funded by Bill Gates.

A WORLD first facility built at James Cook University and funded by Microsoft founder Bill Gates to the tune of $10 million leads global efforts to wipe out dengue fever. The world’s richest man has put his financial muscle behind the effort to eradicate the disease, with Cairns-based scientists showing the way.

JCU, in conjunction with the University of Queensland and about 15 other institutions around the world, are infecting Aedes aegypti mosquitoes with the Wolbachia virus, dramatically shortening their 30-day lifespan and destroying their ability to transmit the disease.

The virus, which is harmless to humans, is then passed on by female mosquitoes to their offspring.

The Cairns Post was yesterday granted access to the project’s centrepiece, a facility at Smithfield where scientists are mimicking tropical environments and studying the effect the virus is having.

Project leader Scott O’Neill says the signs are good and the research could provide one of the few viable options to eradicate the disease.

“What it does is reduces their lifespan,” Prof O’Neill said.

“That’s important for dengue fever because only old mosquitoes transmit the virus. The average lifespan gets reduced by half. That’s still old enough to lay eggs but it is not old enough for dengue transmission.”

Prof O’Neill said the idea behind the research had been around for years but the extra money from the Bill and Melinda Gates Foundation was proving decisive.

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“With Bill Gates’ money there has been a lot of progress in the last few years,” he said.

“The work in Cairns is allowing us to take it to a controlled environment.

“It’s a world first in the way it has been designed.”

While the end result of the project is still years away, Prof O’Neill said he had already
seen enough to give hope.

"The work is coming along very well and all the results show it could work," he said.

"We hope it could be strong enough to eventually eliminate dengue."

The effectiveness of the research was published earlier this year by project members writing for the internationally renowned journal, *Science.*

World first: Research officer Petrina Johnson inside the recreated tropical environment.