

Zika Virus urgently needs improved detection methods as vaccine development faces array of obstacles

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The growing threat of the Zika virus, which the World Health Organization (WHO) believes could infect four million people in the Americas over the next twelve months, must be addressed using a multi-pronged approach, according to an analyst with research and consulting firm GlobalData.

Dr Mirco Junker, GlobalData's Analyst covering Infectious Diseases, says that while a vaccine could be an effective measure in the long term, it remains several years away and faces numerous obstacles to development. As such, limiting people's contact with mosquitoes and developing effective diagnostic tests are more crucial short-term measures.

Dr Junker explains: "The first step in fighting the Zika virus is to address the vector responsible for its transferral to humans - mosquitoes. Achievable actions, such as eliminating shallow standing water, using insecticides, and implementing next-generation genetic or microbiological approaches, would all contribute to the reduction of Zika vector populations.

"Furthermore, the development of a reliable and cost-effective method to detect Zika infections is of paramount importance. The test would need to be sensitive and specific, with high cost-effectiveness, so that it may be employed on a large scale and be able to detect the large proportion of disease cases which are asymptomatic."

The analyst adds that while an effective long-term solution would be a vaccine that offers strong and durable protection against Zika, this could take years to become a reality.

Dr Junker continues: "Several companies, including GlaxoSmithKline, Merck, Johnson & Johnson, Pfizer, and Sanofi, have already expressed interest in developing a Zika virus vaccine, but the current lack of scientific data on Zika presents a major barrier.

"The development of Sanofi's vaccine for dengue, a disease carried by the same type of mosquito as Zika, has taken 20

years, and its efficacy in certain patient populations, most notably flavivirus-naïve individuals, has still not been definitively proven.

"Therefore, even though the Zika virus has been sequenced, it is currently not clear what the best approach in developing a Zika virus vaccine will be, and a definitive timeline on vaccine development is impossible to ascertain."