

Robotack-O-Mos, Anti-Mosquito Robot

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Do you know if ultrasonic wave is capable to keep mosquitoes at bay? Agus Wigardi, student of Mechanical Engineering of UGM along with four classmates have developed anti-mosquito robot by using ultrasonic wave, which is effective and environmentally friendly. The tool made them earn the gold medal in the National Student Week (PIMNAS XXVI) from 9-13 September in Mataram.

“Most people use mosquito repellent which have side-effects,” said Agus recently on UGM campus.

Even the electric mosquito repellent has the side-effect. Therefore, Agus and three students of Faculty of Medicine, Diah Budiasih, Dwi Puspitarini and Aditya Doni P, and Saprindo Prabantara from Faculty of Mathematics and Natural Sciences, were looking for a solution which is effective and low in side-effects.

Ultrasonic wave is a high frequency wave at over 20 kiloHertz that can be heard by certain



animals such as bats, insects, including mosquito. “When hearing the ultrasonic wave, mosquitoes will feel disturbed and later will leave the place. But the sound is safe for humans because humans can only hear sounds between 20 Hertz-20 kiloHertz,” Agus said.

Robot named as Robotack-O-Mos has the form of a decorative lamp. They use components installed in the lamp such as automated motor, buzzer and speaker.

“The lamp cap can rotate at 180 degrees, radiating ultrasonic wave. Mosquitoes will go away when the robot is turned on, producing ultrasonic wave,” said Saprindo.

Saprindo said they created two models of robot, the small one of a 15x15 cm size weighing around 1 kg, while the big robot measuring 30x30 cm, weighing 10 kg. Diah hoped the lamp would able to reduce mosquito-related diseases, such as dengue fever, malaria, cikungunya and filariasis as these have taken many lives in Indonesia.

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