

UGM Students Make Giant Honey Bee into Diabetes Medicine


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Diabetes is not a strange disease among people. The high level of blood sugar is the main cause of the disease. Diabetes mellitus type 2 is caused by diet which usually happens in obesity due to high glycemic index intake. One of potential therapies that is developed recently is probiotics to return the digestive balanced microbiota and reduce insulin resistance.

UGM Veterinary Sciences students, Dion Adiriesta Dewananda, Riesna Martianasari, Moh. Hafidz Farichul Amin, and Mulya Fitrandi as well as Hafidh Shofwan Maajid - Animal Sciences student - tried to make use of giant honey bee (*Apis dorsata*) as probiotics therapy to suppress the blood sugar level in people with diabetes. "We make the product into yoghurt," said Dion, member of the team, in a release sent to journalists on Wednesday (23/8).

The students have selected the honey because, Dion said, in the bee stomach there is *Lactobacillus plantarum* bacteria that are antibacterial, antihyperglycemia, antihypertension and antistringent. This bacteria is then used as starter to ferment the milk into yoghurt. The students do lab tests by giving treatment to rats at Clinical Pathology Department of Faculty of Veterinary Sciences at Universitas Gadjah Mada. This showed that the yoghurt containing prebiotics from the honey proved to be able to reduce the sugar level in the blood and reduce sugar addiction.



“It proved to be able to to reduce te sugar level in the blood and reduce sugar addiction significantly,” he said.

Dion added the reduction was due to the symbiont of metabolism of *Lactobacillus plantarum* in the forms of proteins of lactoferrin, glucolicin, lipicinid, dorsitin, and apiricin that can reduce diabetes pathogenesis. The probiotics yoghurt drinks are expected to be an innovation to replace regular diabetes drugs because they come in the form of drinks that are popular.

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