

# UGM Students Make Red Ginger Ointment for Diabetic Wounds

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Diabetes is a non-communicable disease that has high risks. If people with diabetes suffer injuries, it will take a long time to heal.

To cure the injury, usually antibiotics are used, but long term usage may cause bacterial resistance.

This condition has driven three UGM students to find a solution. Erman Satya Nugraha, Dedy Setiawan, and Dion Adiriesta Dewananda tried to find an alternative to cure infection of *Methicillin Resistant Staphylococcus aureus* (MRSA) in diabetic wound through red ginger as ointment.

Erman said red ginger extract contained active compounds that are able to kill bacteria. These are flavonoid quercetin, flavonoid rutin, tannin, saponin, phenol, steroid, and alkaloid.

“Those compounds are strong bactericidal with agonist mechanism, such as making pores in the walls of bacteria cells, inhibiting protein synthetic enzymes, breaking DNA and inhibiting the reactivity of cell membranes,” he said on Monday (27/8) at UGM.

He added phenol compound have the role in vasodilation and formation of new blood veins that help tissue healing.

The students later made the red ginger into ointment, which was tested on rats for 15 days.

“It resulted that the red ginger ointment is proved to accelerate healing of diabetic wounds infected by MRSA compared to commercial antibiotic ointment,” he said.

Going forward, the students hoped the ointment could prevent the emergence of bacterial resistance and be an alternative to diabetic wound healing.

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