

## Green Grass Jelly Potential to Improve Immunity

Tuesday, 14 June 2016 WIB, By: Marwati

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Green grass jelly proves to be able to improve immunity or immunomodulator to help improve body defence mechanism. Five Biology UGM students have recently researched what compounds it contains and the effects of green grass jelly on macrophage cells or immunity cells.

Rendi Mahadi, Krisnanda Surya Dharma, Mustafid Rasyid, Lindia Anggraini, and Rahma Nurdiyanti did the research for the Student Creativity Programme for Exact Sciences of UGM.

Rendi said body immunity can be improved through various ways, including consuming synthetic supplement or immunomodulator source or natural antioxidant. Use of factory medicines or synthetic supplement, however, may cause side-effects, in addition to the price that is relatively not cheap.

"That's why we're trying to examine further the potential of green grass jelly as immunomodulator source and natural antioxidant," he said on Monday (13/6) at Faculty of Biology UGM.

They make three types of extracts of grass jelly, which are chloroform extract, ethyl acetate extract,



and ethanol extract. Immunomodulator activity test is carried out by testing these extracts in the macrophage cells of mice. Later, antioxidant test is carried out using spectrophotometer to see the index value of antioxidant activity (IAA). Lastly, compound categorisation is done using Thin Layer Chromatography method to know the compounds in green grass jelly.

The results showed that green grass jelly contains various secondary metabolite compounds such as terpenoid, flavonoid, phenolic, and tannin that serve as immunomodulator and natural antioxidant.

"These compounds make the body's macrophage cells more active in swallowing up the pathogen. They are also active in blocking free radicals from going into the body," he explained.

The IAA in green grass jelly extract is also very high around 6.3 - 7.2, meaning the extract has very strong antioxidant activity, bigger than 2, and very high capacity value and macrophage phagocytosis index. This means green grass jelly can serve as a new alternative as immunomodulator source and natural antioxidant for the body.

Green grass jelly can be processed into healthy drinks, natural supplement, or herbal having the role to improve body immunity system. "Green grass jelly can be one solution to people in maintaining their fitness, especially those who are always on the go," he said.

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