

Brown Algae Extract to Increase Immunity System

Friday, 20 July 2018 WIB, By: Marwati




Algae is known to be the raw material for gelatin. There are many types of algae that can be utilised apart from the regular green one. The brown algae (*Padina australis*) that is abundant in Sepanjang coast of Gunung Kidul regency is often used as feed for the fish by the local people. Actually, the brown algae contains laminarin compounds that have immunostimulator activities.

Immunostimulators are compounds that can increase body immunity system. This system serves to protect the body from diseases. One of the body immunity systems is non-specific or macrophage that serves like soldiers to defend the body when infected by bacteria or virus. If this system is weak, people may easily get sick while productivity reduces.

Three UGM students, Elyta Kusumawati and Nurul Maghfiroh (Pharmacy students) and Pundhi Nastiti (Biology), have made use of local potential of Yogyakarta which is the brown algae to increase body immunity system. They did it under the supervision of drh. Retno Murwanti, M.P., Ph.D., Pharmacy lecturer, and were funded by Higher Learning Directorate General for Student Creativity Programme 2018.

Elyta said they extracted the brown algae using ethanol. The extract is tested on rats in 3 dosage levels. Later, they did phagocytosis macrophage activity test as well as level of NO (Nitric Oxide)



measurement to know the extract capacity in improving the immune system. Macrophage is a cell that has the role to counter bacteria/virus. Macrophage does phagocytosis or eating foreign substance hazardous for the body,

“The tests showed an increase in the phagocytosis activities of the rat macrophage that is treated with the extract of brown algae,” Elyta said on Friday (20/7).

The next test, measurement of NO level of the macrophage. If the macrophage activity increases, the NO that is obtained will increase, too. NO has the function to destroy bacteria cells entering the body. They found that NO level increases in rat macrophage that is treated with brown algae.

It was known that brown algae can increase immunity system through increased macrophage activity. The researchers wish the research can be used as nutraceutical to improve immune system and to be published wider for further research.

Related News

- [Green Grass Jelly Potential to Improve Immunity](#)
- [Morinda citrifolia and Mangosteen Rind Potential as Cancer Immunotherapy](#)
- [Snakefruit Potential to Increase Immunity](#)
- [UGM Students Observe Papaya Leaves to Strengthen Immunity System](#)
- [Gangang Ulva Chips: Creation of UGM Biology Students](#)