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# Durian waste gets turned into bandages by clever Singaporean scientists

Sustainable first aid.

By [Dale John Wong](#) September 20, 2021





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With the durian fetish among Southeast Asians going nowhere anytime soon, it was only a matter of time before some smart folks ended up creating something useful from all the waste produced on the sidelines.

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A team of researchers from Singapore's Nanyang Technological University (NTU) has successfully managed to [transform durian husks into antibacterial gel bandages](#) – a solution that tackles the issue of what to do with the inedible parts of the stinky fruit.



IMAGE: Reuters

According to a news report, the process involves extracting cellulose powder from the husks following a free-drying process. The cellulose powder is then mixed with glycerol (another recycled byproduct coming from the biodiesel and soap industry), which turns it into a soft gel that can be proportioned into bandage strips.

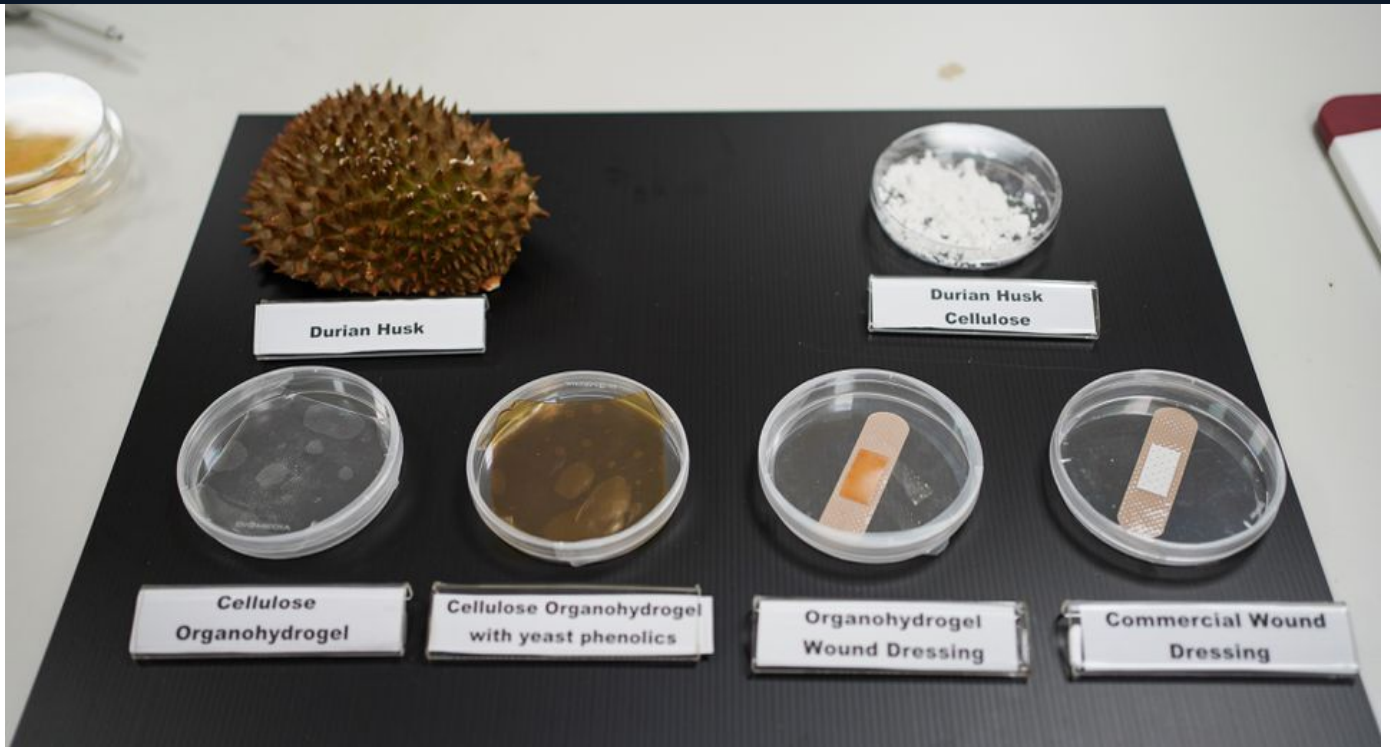


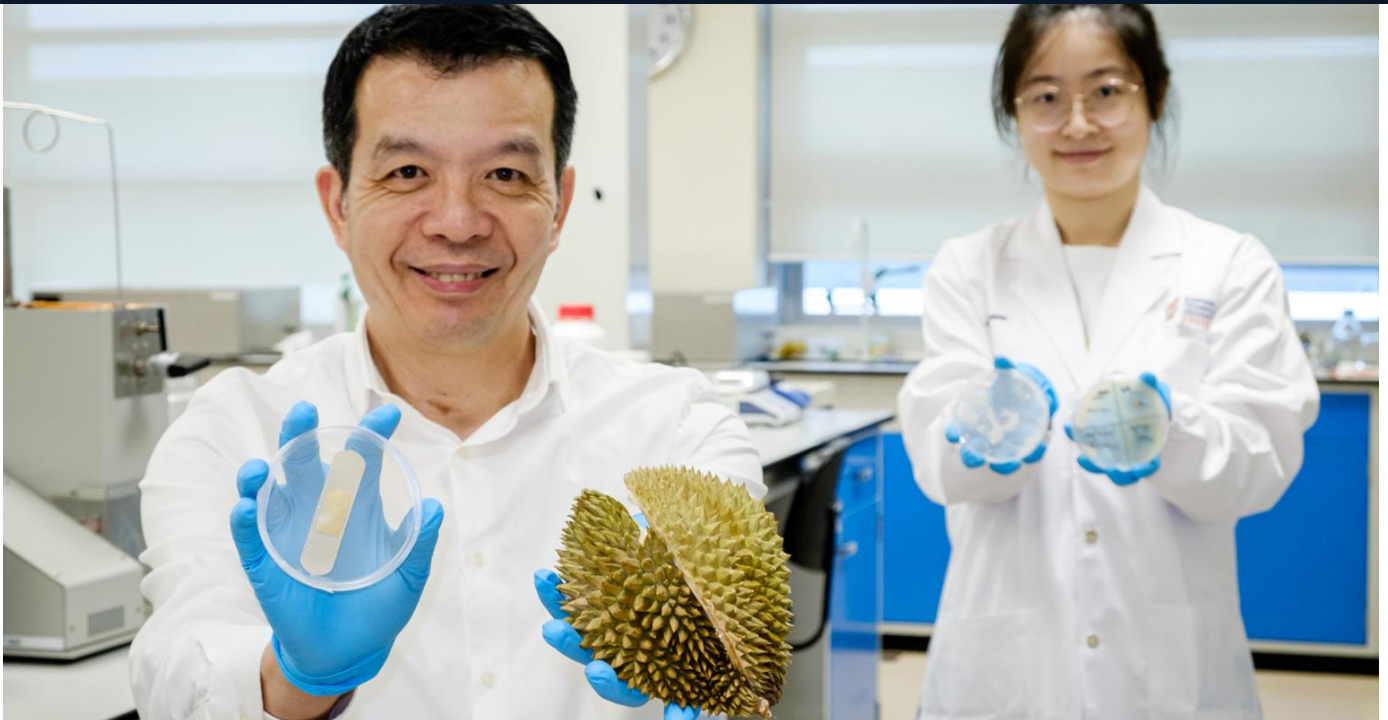
IMAGE: Reuters

The strips are then treated with compounds from baker's yeast – which have antibacterial properties, and are then made ready for use in first aid situations. One added benefit of the bandage is its ability to keep wounded areas cool and moist, which helps speed up the healing process.

## More than just food.

Despite loving the fruit so much, many Southeast Asian locals seldom ever consider the use-cases of the durian's husk – which comprises more than half of the entire fruit.

"In Singapore, we consume about 12 million durians a year, so besides the flesh, we can't do much about the husk and the seeds, and this causes environmental pollution," said William Chen, a professor and director of the food science and technology program at the university.



Professor William Chen (left) and Dr. Tracy Cui (right) from Nanyang Technological University (NTU) holding up prototype bandages made from durian husks. IMAGE: The Straits Times

Chen also confirmed that the team's technology is also applicable to other forms of organic food waste, including grains and soybeans, which could end up becoming particularly useful as a way of dealing with Singapore's food waste issue.

And as a bonus, the waste materials used in the creation of the bandages (which are also odorless and biodegradable) could also end up proving to be more cost-effective than traditional ones, which typically use more expensive metallic compounds like silver or copper to attain its antimicrobial properties.



IMAGE: The Straits Times

Since coming up with prototype products, the team have since entered talks with potential industry partners to determine the possibility of ramping up production for the bandages. According to Chen, the full product could even hit stores within just two years should all things go smoothly, with retail prices expected to be competitive right from the beginning.

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