

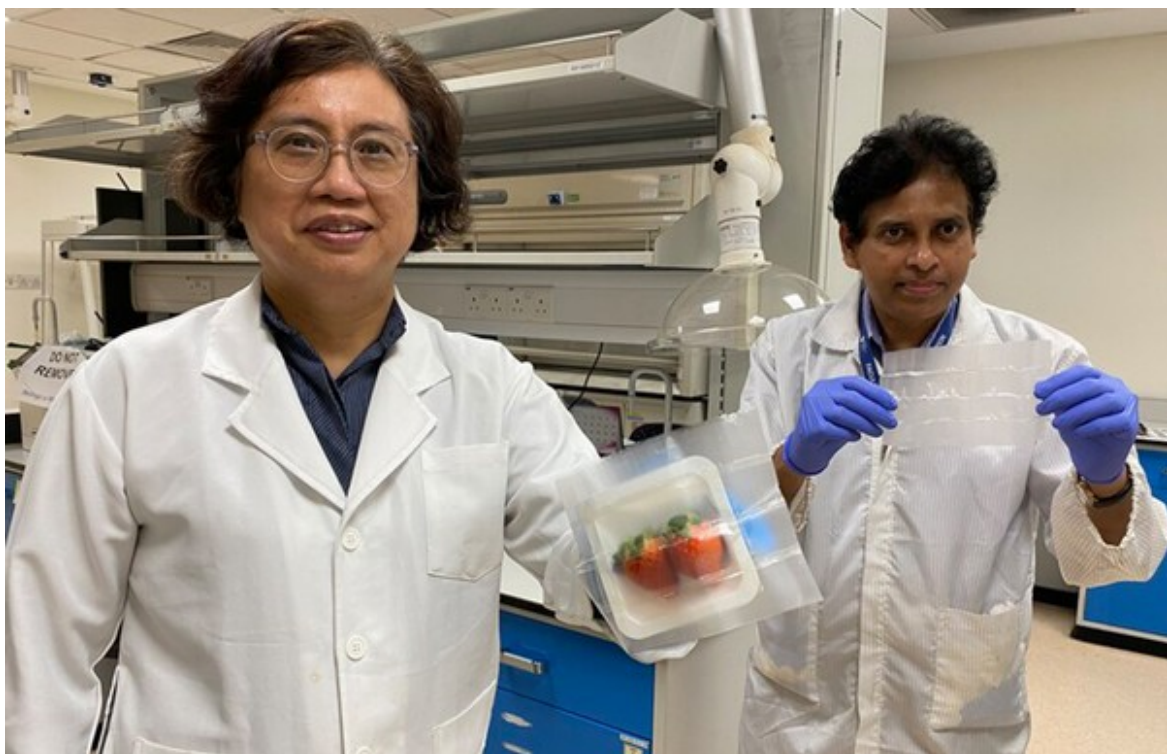


## Scientists develop bacteria-killing packaging

A team of scientists from NTU Singapore and Harvard TH Chan School of Public Health in the US has developed a 'smart' food packaging material that is biodegradable, sustainable and kills microbes that are harmful to humans. It could also extend the shelf life of fresh fruit by two to three days.

The natural packaging is made from a type of corn protein called zein, starch and other naturally derived biopolymers, infused with a cocktail of natural antimicrobial compounds. These include oil of thyme and citric acid.

Experiments have shown that when exposed to increased humidity or enzymes from harmful bacteria, the fibers in the packaging release natural antimicrobial compounds, eliminating common dangerous bacteria that contaminate food, such as *E. coli* and *Listeria*, as well as mold. killed.



The packaging is designed to release the necessary miniscule amounts of antimicrobial compounds only in response to the presence of additional moisture or bacteria. This ensures that the packaging can withstand various exposures and last for months.

Source: [ntu.edu.sg](https://www.ntu.edu.sg/news/detail/bacteria-killing-food-packaging-that-keeps-food-fresh) (<https://www.ntu.edu.sg/news/detail/bacteria-killing-food-packaging-that-keeps-food-fresh>)

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