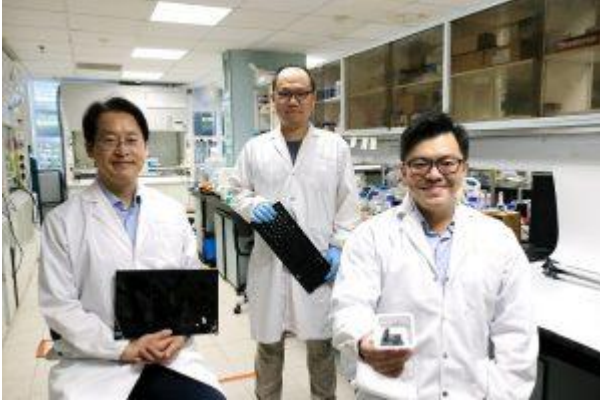


Repurposing E-Waste into Petri Dishes

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NTU Singapore scientists have managed to recycle electronic waste ([e-waste](#)) into laboratory cell culture containers, such as petri dishes.

According to the scientists, e-waste is rarely recycled due to its complex composition and hazardous additives. Repurposing the same could lead to a more sustainable and circular economy.

In the course of their study, the team at NTU Singapore-CEA Alliance for Research in Circular Economy (SCARCE), repurposed the e-waste plastics, subjecting them only to sterilisation, before being trialed in lab experiments.

These experiments show that over 95% of the human stem cells seeded on plastics scavenged from discarded computer components remained healthy after a week, a result comparable to cells grown on conventional cell culture plates.

The findings indicate a potential new sustainable use for e-waste plastics, which account for about 20% of the 50 million tonnes of e-waste produced worldwide each year.

According to the scientists, repurposing them for cell culture in the lab would not only allow maximum value to be recovered from e-waste plastics, but also help to reduce the amount of plastic waste generated from biomedical research.

The current findings build on a 2020 study led by the same NTU team, which investigated the effect of e-waste plastics on six different human cell types and found healthy cell growth despite the hazardous elements to be found in e-waste plastics.