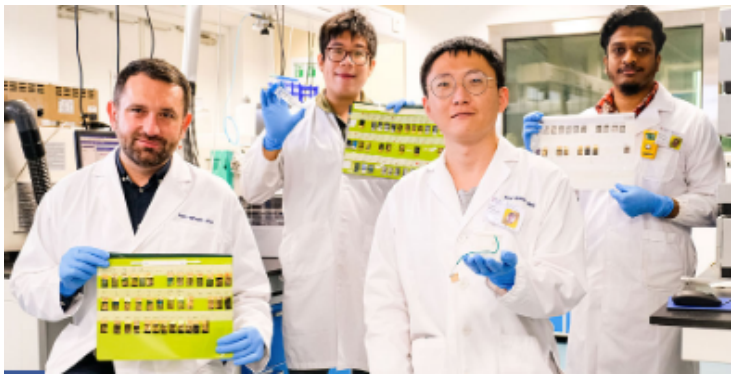
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ASIA EDITION

Singapore develops portable device that makes 3D images of skin in 10 mins

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The team is exploring conducting clinical trials later this year



A team from Nanyang Technological University, Singapore (NTU Singapore) has developed a portable device that produces high-resolution 3D images of human skin within 10 minutes.

The team said the portable skin mapping (imaging) device could be used to assess the severity of skin conditions, such as eczema and psoriasis.

3D skin mapping could be useful to clinicians, as most equipment used to assess skin conditions only provide 2D images of the skin surface. As the device also maps out the depth of the ridges and grooves of the skin at up to 2mm, it could also help with monitoring wound healing.

The device presses a specially devised film onto the subject's skin to obtain an imprint of up to 5 by 5 centimetres, which is then subjected to an electric charge, generating a 3D image.

The researchers designed and 3D printed a prototype of their device using polylactic acid (PLA), a biodegradable bioplastic. The battery-operated device which measures 7cm by 10cm weighs only 100 grams.

The made-in-NTU prototype is developed at a fraction of the cost of devices with comparable technologies, such as optical coherence tomography (OCT) machines, which may cost thousands of dollars and weigh up to 30 kilogrammes.

To further validate its efficacy, the team is exploring conducting clinical trials later this year to test the feasibility of their device, as well as other potential therapeutic uses.