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Personalised 3D-printed ostomy seal set to improve patient outcomes in Australia

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IMCRC-CSIRO 3D printed ostomy seal



A new manufacturing research collaboration utilising 3D print technologies could soon provide people living with stoma bags with access to personalised ostomy seals that will improve their quality of life. An ostomy is surgery to create an opening (stoma) from an area inside the body to the outside. It treats certain diseases of the digestive or urinary systems.

Medical technology company Singular Health, in collaboration with Australia's national science agency Commonwealth Scientific and Industrial Research Organisation (CSIRO), has secured $100,000 in funding from the Innovative Manufacturing Cooperative Research Centre (IMCRC) to develop and commercialise the device, which acts as a seal between a patient's abdomen and stoma bag.

The 9-month project, enabled by $538,984 total cash and in-kind contributions from all three organisations, will use CSIRO-developed software to build upon Singular Health's existing 3Dicom "Scan to Surgery" software, creating a 'surface scan to model' extension that will provide the 3D visualisation capability needed to process patient scans and customise the device.

The ostomy seal can then be designed and manufactured to suit each patient's unique morphology, greatly reducing the risk of leakage, a common issue that compromises the effectiveness of generic devices.