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The successful development of the patch will lead to new economic opportunities with local wound care product developers



Associate Professor Rajesh Katare at the University of Otago, New Zealand has been granted funding to research the development of a novel, multi-use, off-the-shelf, biodegradable ulcer patch as an advanced wound-care product.

Based in the School of Biomedical Sciences, he is the first person in the Department of Physiology to receive funding through the Ministry of Business, Innovation and Employment (MBIE) Endeavour Fund's Smart Ideas programme.

The funding will go into researching a patch to treat life-threatening ischemic ulcers. Associate Professor Katare will work with a team of experts in nanomedicine and bioengineering techniques, to combine synthetic molecular regulators that accelerate wound healing.

He says an estimated one to two per cent of developing countries' populations will suffer from a chronic wound in their lifetime.

"The incidence of non-healing wounds is also expected to increase as our population ages as well as for those with comorbidities, such as diabetes and hypertension. In Aotearoa, there is a disproportionate increase in the rate of chronic non-healing ulcers in the Māori population, especially in those with diabetes. Current treatments fail to prevent amputation in more than 58 per cent of diabetic patients developing foot ulcers", Katare said.

The research team will work with both New Zealand and international collaborators to develop the patch and assess its clinical use in key markets.