

## Pre-clinical research shows promising treatment for diabetic wounds using stem cells

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REMEDI is a part of the National University of Ireland Galway's translational and clinical research programme with the objective of translating research discoveries into improved patient care. Credit: National University of Ireland Galway

Pre-clinical research has generated some very promising findings using adult stem cells for the treatment of diabetic wounds. The research



carried out by scientists at the National University of Ireland Galway, is published in *Diabetes*, the official journal of the American Diabetes Association.

The work showed that a particular type of stem cell, known as the <u>mesenchymal stem cell</u> (MSC), could increase wound healing when applied together with a biomaterial made from collagen. Diabetic patients have an impaired ability to heal wounds and there is a critical need to develop new treatments to improve healing particularly in patients with foot ulcers. In fact, <u>foot ulceration</u> will affect up to 25% of people suffering from diabetes during their lives and may result in amputation.

For the past number of years, lead-author on the research paper Dr Aonghus O'Loughlin has been funded by Molecular Medicine Ireland to work in the Regenerative Medicine Institute (REMEDI) at National University of Ireland Galway and Galway University Hospitals. He collaborates with Professor Timothy O'Brien, Director of REMEDI, to develop new ways to increase healing of <u>diabetic wounds</u>.

Professor O'Brien, principal investigator on the research project, said: "This data will now allow us proceed to apply for approval to carry out first in human studies of this therapeutic approach. We are currently preparing the regulatory submission to undertake a human clinical trial. Meanwhile, part of the funding needed to pursue the human clinical trial has been received from Diabetes Ireland."

"MSC's have many attractive therapeutic properties", Professor O'Brien added. "They can be isolated from adults and are easy to grow in the laboratory. It has been shown in Galway and by other scientists that they release special factors that can help new blood vessels to grow. Increasing blood flow is a key step in wound healing."



## Provided by National University of Ireland, Galway

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