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IIT engineers develop novel technology for helping diabetics

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The technology uses the biological material (ribonucleic acid and locked nucleic acid bases) to directly help healing of the skin without any side effects.



A team of biomedical engineers led by assistant professor Durba Pal, at the Indian Institute of Technology (IIT) Ropar has come out with a unique procedure which can go a long way in benefiting diabetics undergoing surgical procedures or having suffered injuries.

The technology uses the biological material (ribonucleic acid and locked nucleic acid bases) to directly help healing of the skin without any side effects.

Following injury, a transient down regulation of miR200b, which is a specific non-coding RNA, can be used as a potential therapeutic target for diabetic wound healing that can help in hastening the restorative process.

The high expression of miR200b in diabetic wound endothelial cells cause for its dysfunction, leading to healing impairment. The research carried out shows that diabetic wound can be healed by delivering anti-miR200b locked nucleic acid bases (LNA) at the wound edge. This is the first evidence showing miR200b as a potential therapeutic target for diabetic wound healing.

Recognising the work of Durba Pal, as an important innovative research which is highly significant to the human race, the Association of American Physicians of Indian Origin (AAPI) awarded her at its 11th annual Global Healthcare Summit (GHS) held at Kolkata, recently.