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DEPARTMENT OF
SCIENCE & TECHNOLOGY
सत्यमेव जयते

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TECHNOLOGY
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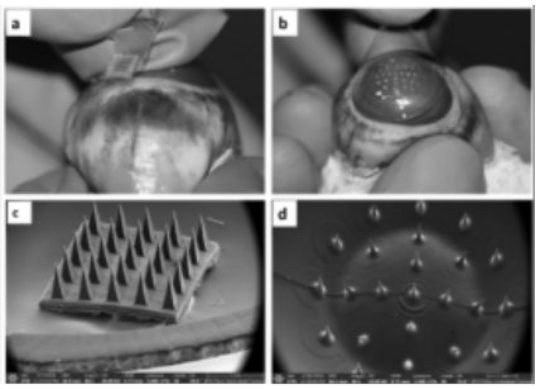
PENDING

(IN202111042201) A microneedle patch and a method of preparation thereof



NEED

Ocular drug delivery systems often face limitations due to pain, invasiveness, and slow absorption. What if drugs could be delivered directly to the posterior region of the eye, painlessly and in seconds?

MARKET ANALYSIS

The global microneedle drug delivery market is projected to grow at a CAGR of 10.2% from 2023 to 2033, driven by the need for non-invasive drug delivery methods in ophthalmology. (Source: Research and Markets)

TECHNOLOGY OVERVIEW

This microneedle-based patch delivers therapeutic drugs to the posterior eye region. The microneedles are sharp, dissolve in 60 seconds, and provide precise drug delivery with minimal invasiveness, offering an advanced alternative to traditional methods.

Target Industries

1) Pharmaceutical companies focused on ophthalmic drug delivery systems. 2) Medical device manufacturers developing minimally invasive delivery systems. 3) Healthcare providers seeking to improve patient comfort and drug efficacy in eye care treatments.

TECHNOLOGY KEY FEATURES

1) Microneedles dissolve within 60 seconds. 2) Targets posterior eye regions (sclera, cornea). 3) Uses drug-loaded polymeric matrix for enhanced drug delivery. 4) Minimally invasive and painless.

AT A GLANCE

- SDG 3 (Good Health and Well-being), SDG 9 (Industry, Innovation, and Infrastructure)

Read more here

Technology is available for licensing/ co-development.

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