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DEPARTMENT OF
SCIENCE & TECHNOLOGY
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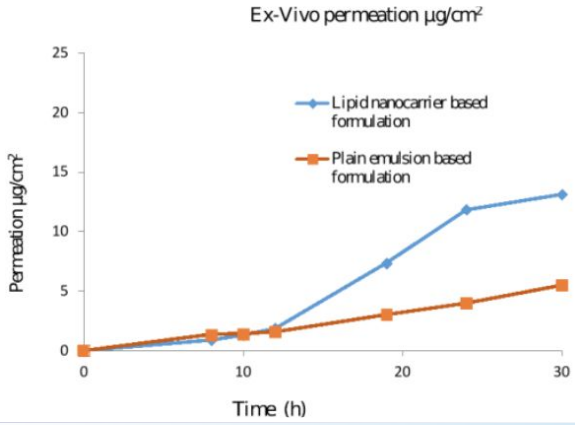
PENDING

(IN201911011317) Lipidic nanocarriers embedded topical preparation of pde4 inhibitors



NEED

More than 30% of topical treatments for psoriasis and eczema fail because drugs degrade or penetrate poorly through the skin's outer layer. Current systems lose up to 50% of active ingredients, reducing patient outcomes and prolonging healing.

MARKET ANALYSIS

The global topical drug delivery market is expected to grow at a CAGR of 7.5%, reaching $195 billion by 2033, driven by rising cases of chronic skin diseases and demand for non-invasive therapies. [Source: Market Research Future, 2024]

TECHNOLOGY OVERVIEW

This patent presents a lipidic nanocarrier system embedding PDE4 inhibitors, enhancing their permeation across the skin barrier. Using a hot emulsification method, it enables controlled, prolonged drug release with improved skin retention, supporting treatment of chronic skin inflammatory diseases without rapid drug loss.

Target Industries

Dermatology Pharma, Advanced Cosmeceuticals, Chronic Disease Topical Therapeutics. , Pharmaceutical formulation developers, nanotechnology delivery platform providers, topical product R&D units focusing on inflammatory skin conditions.

TECHNOLOGY KEY FEATURES

Particle size 50–400 nm, drug loading 0.05–5% w/w, lipid content 1–10% w/w, advanced hot emulsification technique, prolonged drug retention, multiple compatible therapeutic agents, improved skin permeation efficiency over existing topical solutions.

AT A GLANCE

- SDG 3 (Good Health and Well-being), SDG 9 (Industry, Innovation, and Infrastructure), SDG 12 (Responsible Consumption and Production)

Read more here

Technology is available for licensing/ co-development.

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