



Breakthrough for Treating Radiation Dermatitis in Cancer Patients: Encapsulated Cannabidiol in Nano-Structured Lipid Carriers

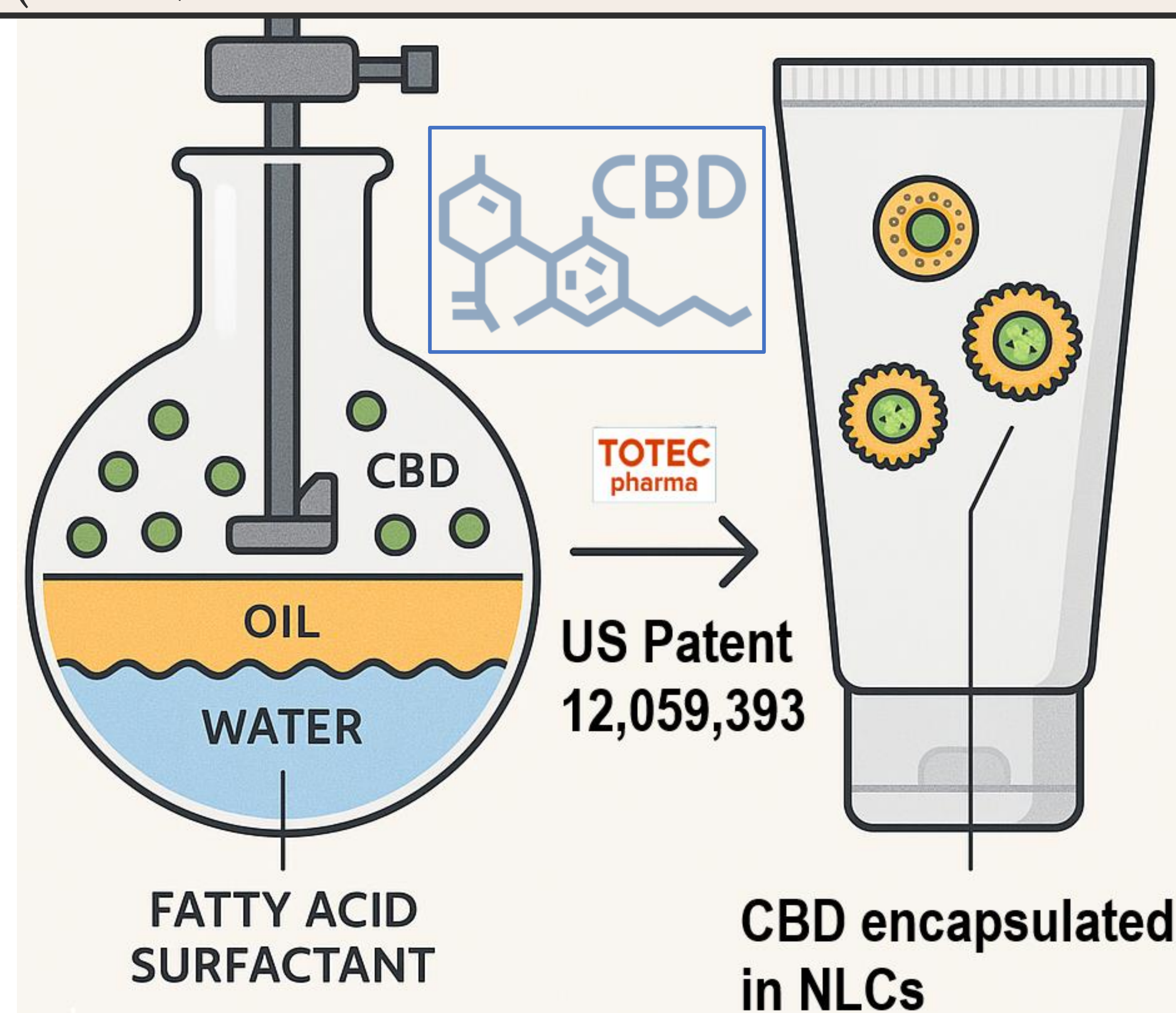
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Problem Statement

- Radiation dermatitis affects up to 95% of cancer patients undergoing radiation therapy.
- Current treatments (e.g., corticosteroids, silver sulfadiazine) are often ineffective.
- There is no approved Rx-strength topical treatment for this condition.

Technical Solution

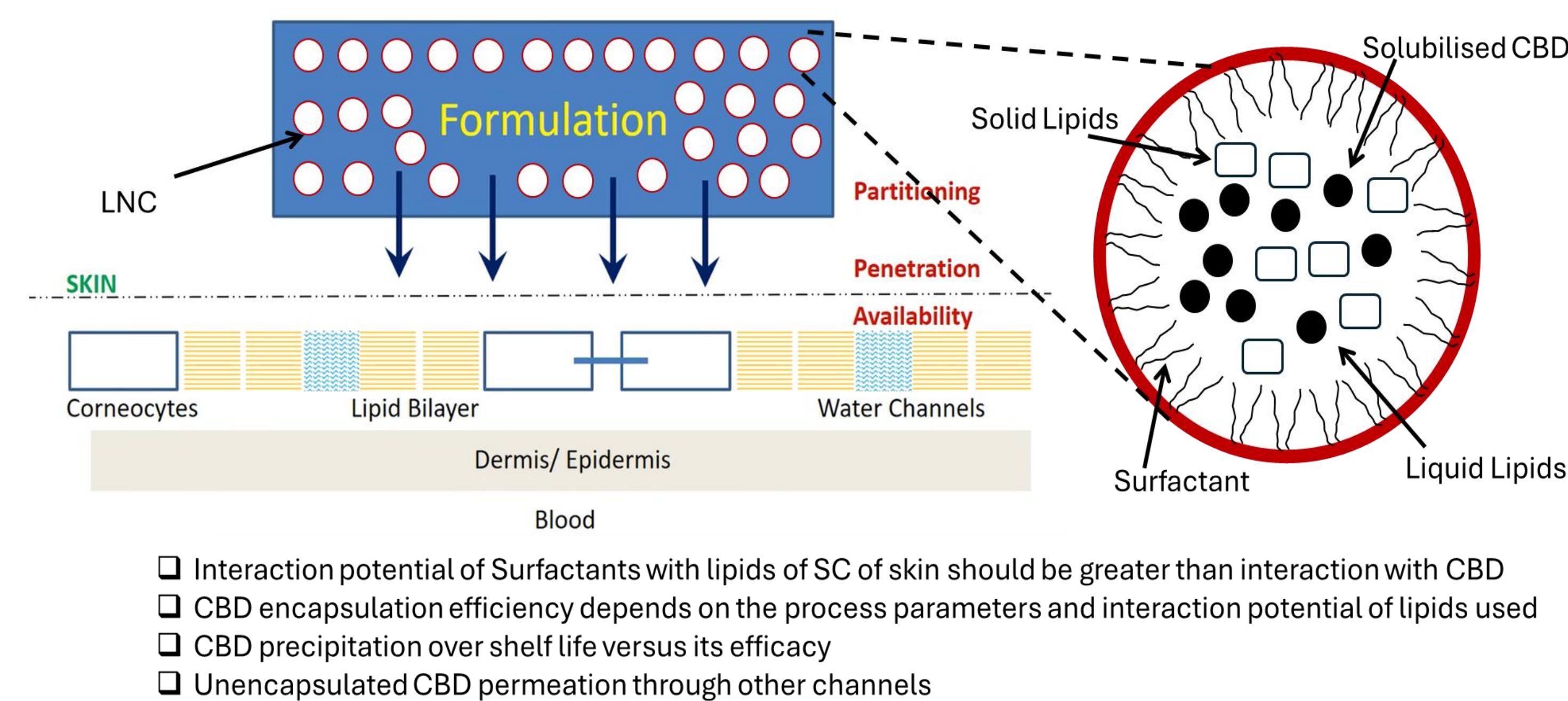
- The formula targets CB2 receptors by utilizing a novel encapsulated form of Cannabidiol (CBD).
- The encapsulation platform is based on patented nano-structured lipid carriers (NLCs).



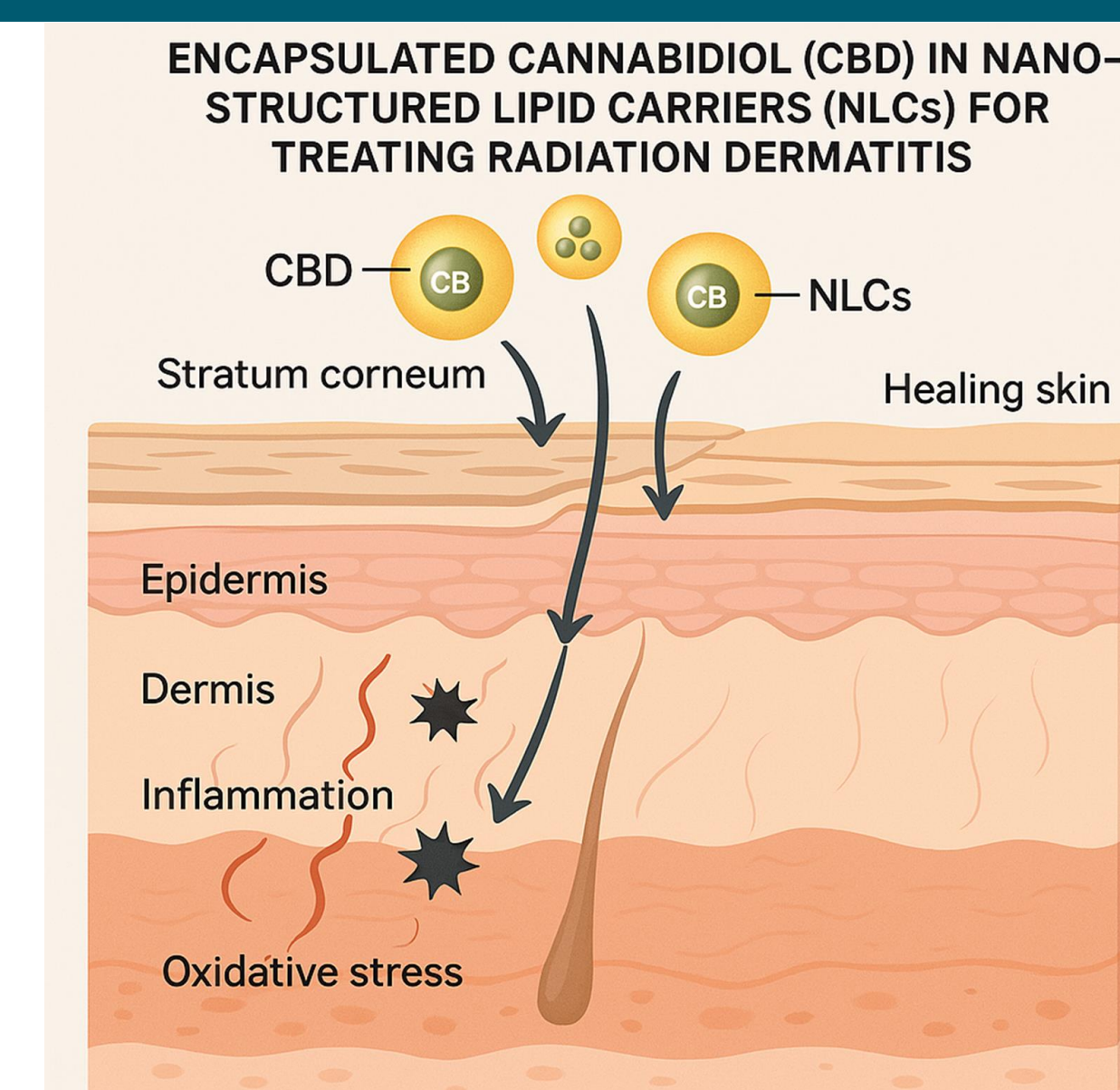
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Technical Solution

- Quantum chemical calculations are employed to optimize the formulation.
- NLCs enhance the transport of CBD through the stratum corneum.
- NLCs help overcome barriers related to CBD's solubility and skin absorption.



Mechanism



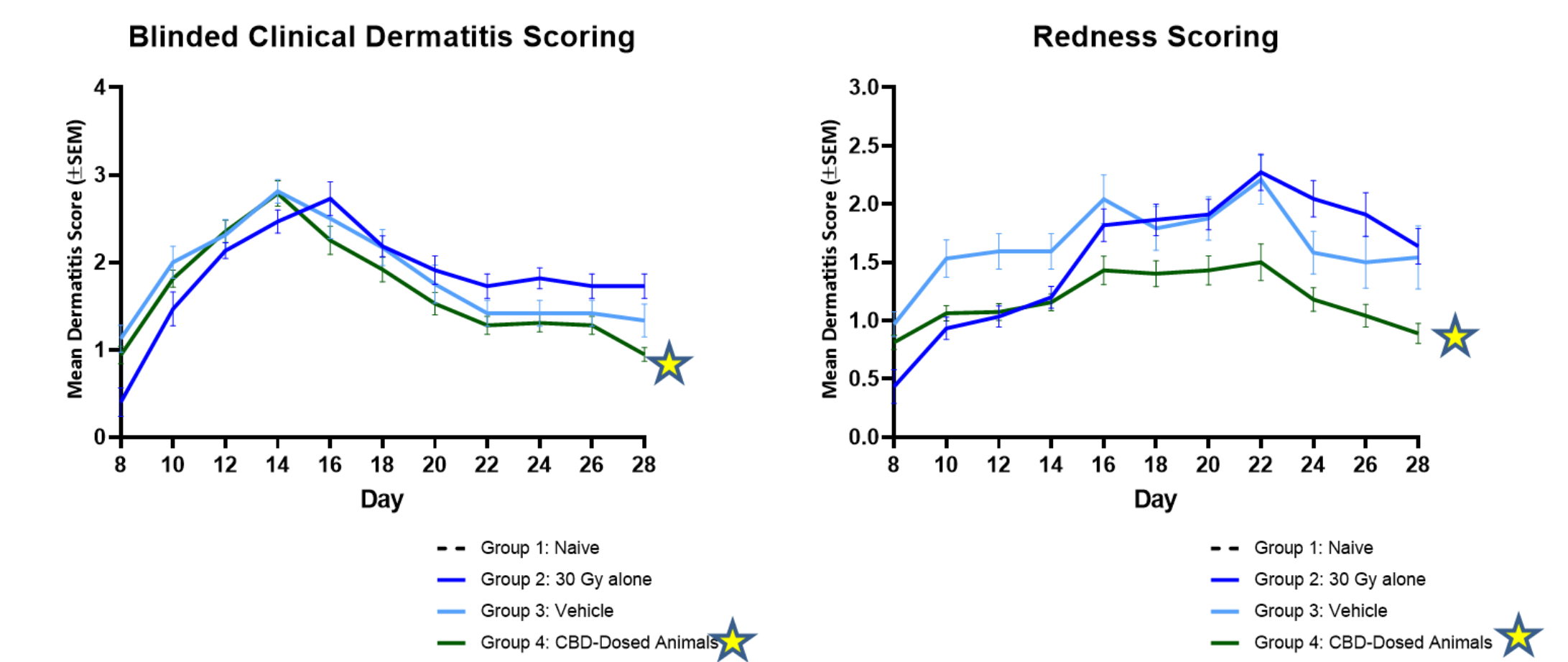
Benefits

- Rx-strength topical CBD crème.
- Designed to reduce burning, itching, and pain associated with radiation dermatitis.
- Utilizes a water-based micellar delivery system to maintain CBD efficacy.

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Clinical Validation

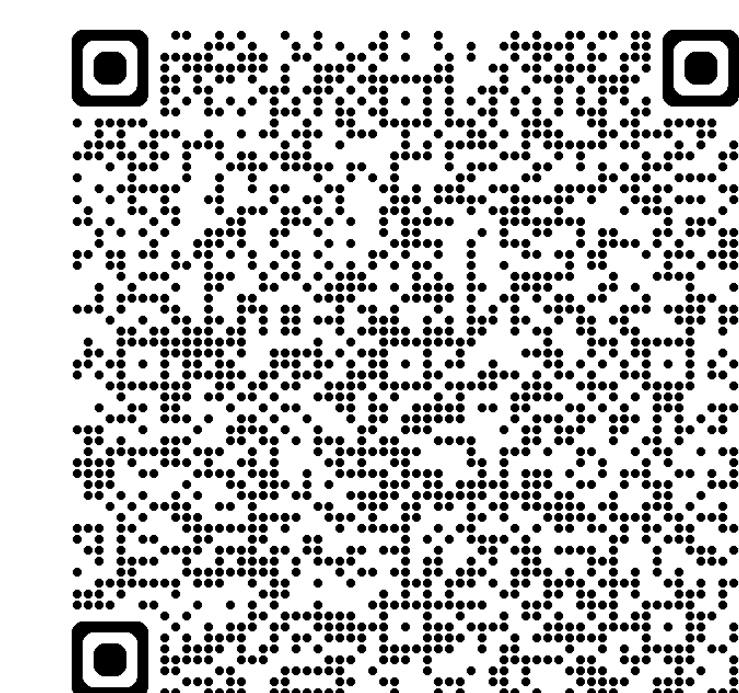
Radiation Dermatitis - Animal Model Data



- Demonstrated reduction in oxidative stress and accelerated healing.
- CBD shown to reduce inflammation and pain in topical applications.
- In-vivo, blinded clinical dermatitis scoring (≥ 2) and the percent of animals with severe skin damage (Redness score ≥ 3)

Next Steps

- Conduct clinical trials
- Initiate commercialization for Radiation Dermatitis
- Expand Platform
 - Beyond dermatitis: Insulin resistance
 - Beyond CBD: Curcumin



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