

# Transdermal matrices modified with proteins and peptides containing adaptogens

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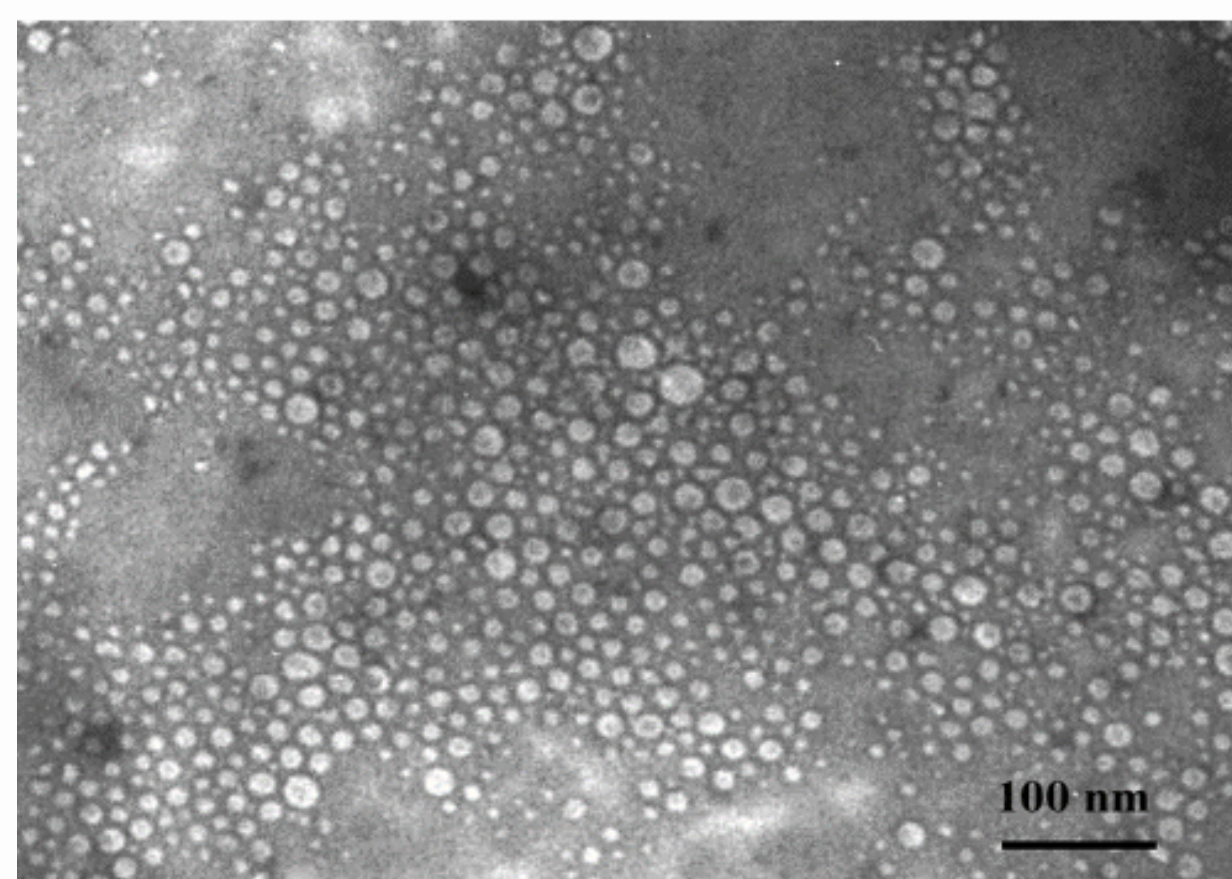
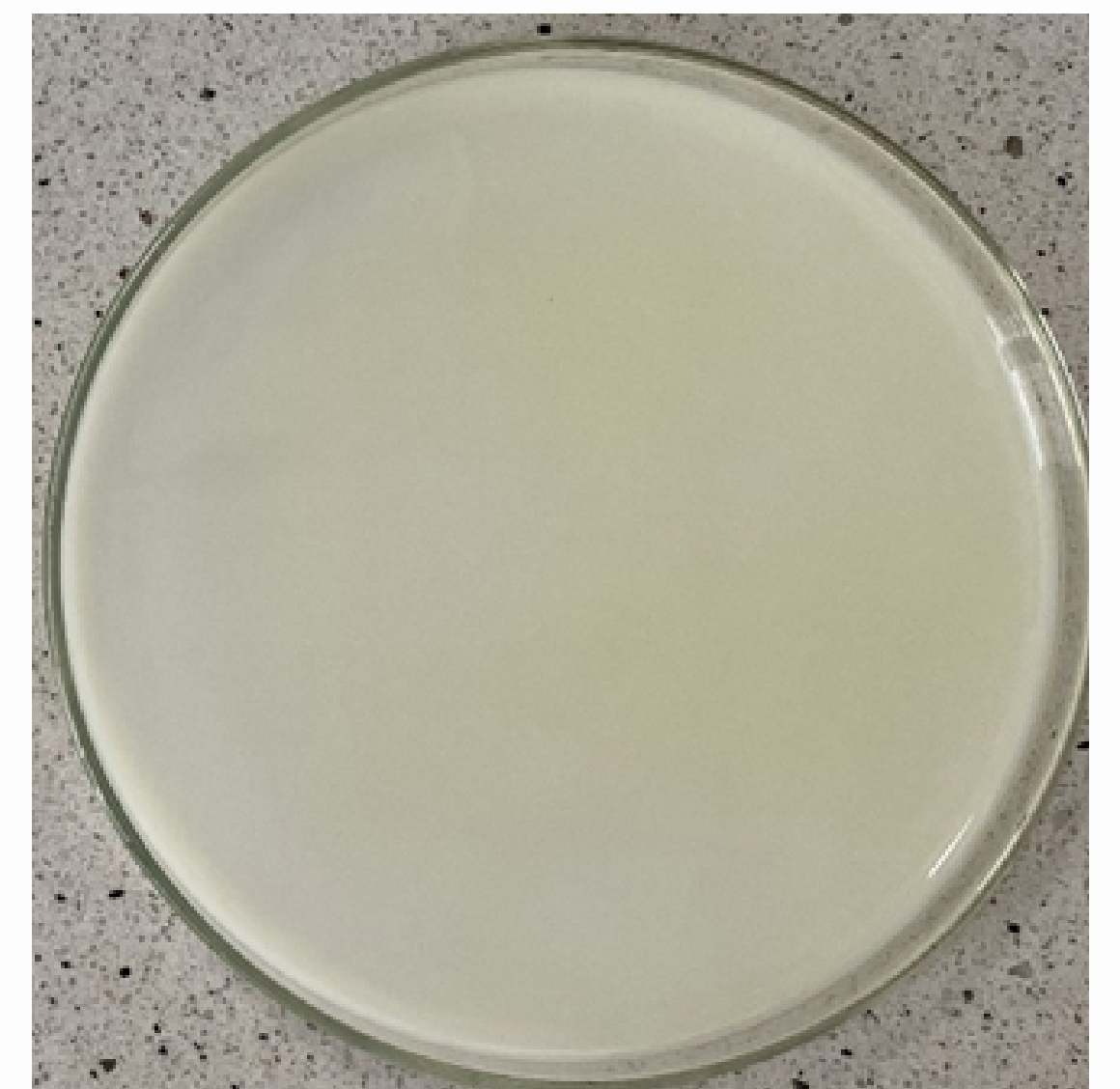
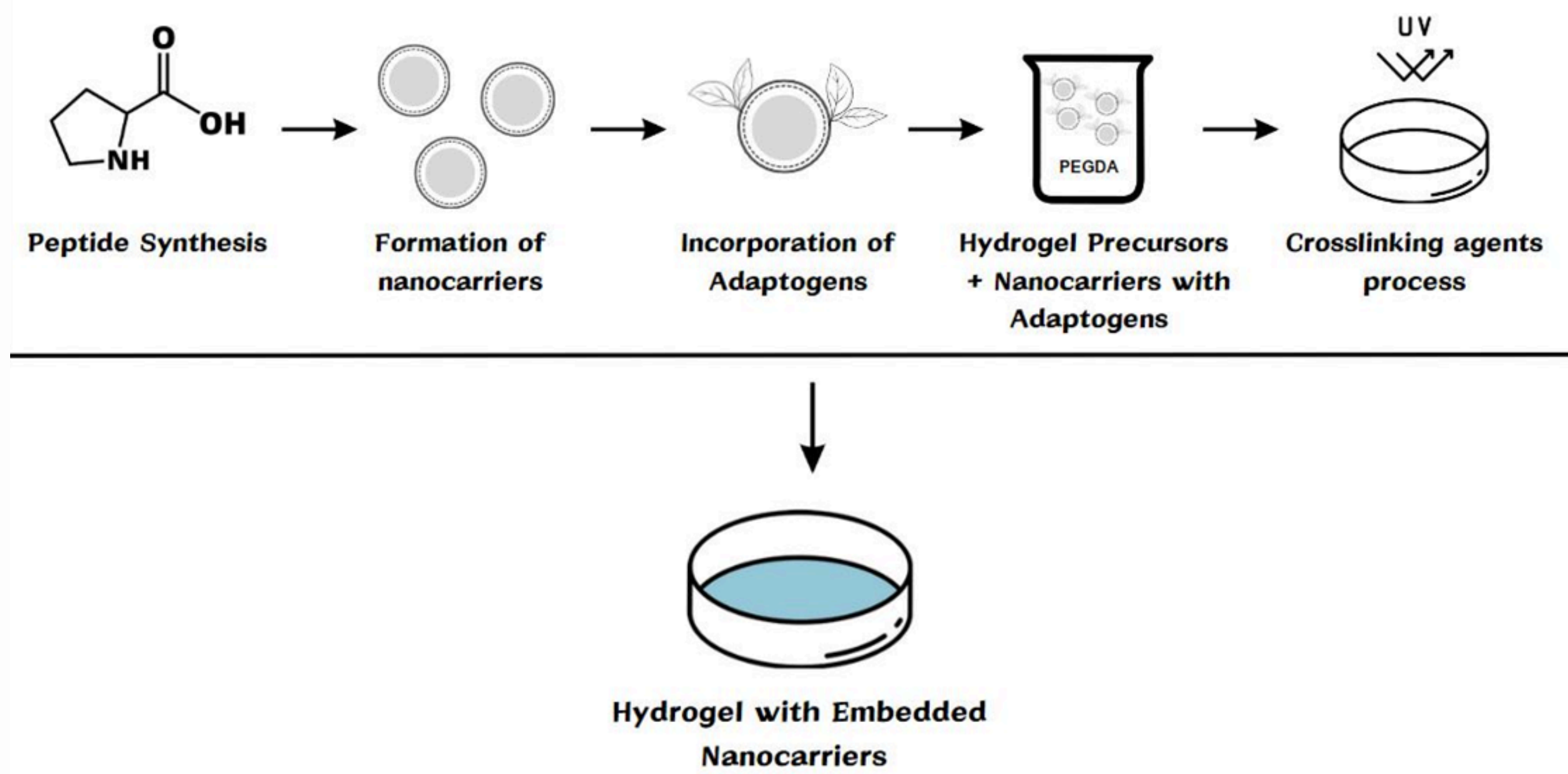
## DESCRIPTION

Transdermal matrices modified with proteins and peptides containing adaptogens offer a promising strategy for advanced skin therapy and care. Adaptogens, recognized for their potent antioxidant and stress-mitigating properties, were integrated into these matrices to promote skin protection and regeneration. The incorporation of proteins and peptides enhanced the stability of the active compounds and improved their transport efficiency across the skin barrier, enabling controlled and sustained release. This study investigated the physicochemical properties, stability, and therapeutic efficacy of the matrices. Results revealed that the modified matrices significantly increased the release efficiency of active ingredients while maintaining their stability and biological activity. The adaptogens demonstrated notable antioxidant properties, effectively reducing oxidative stress and enhancing resistance to environmental damage. Additionally, the matrices facilitated skin regeneration and exhibited therapeutic potential in managing skin inflammation, notably by accelerating wound healing. These findings underscore the potential of protein- and peptide-modified transdermal matrices as innovative solutions in dermatological and cosmetic applications.

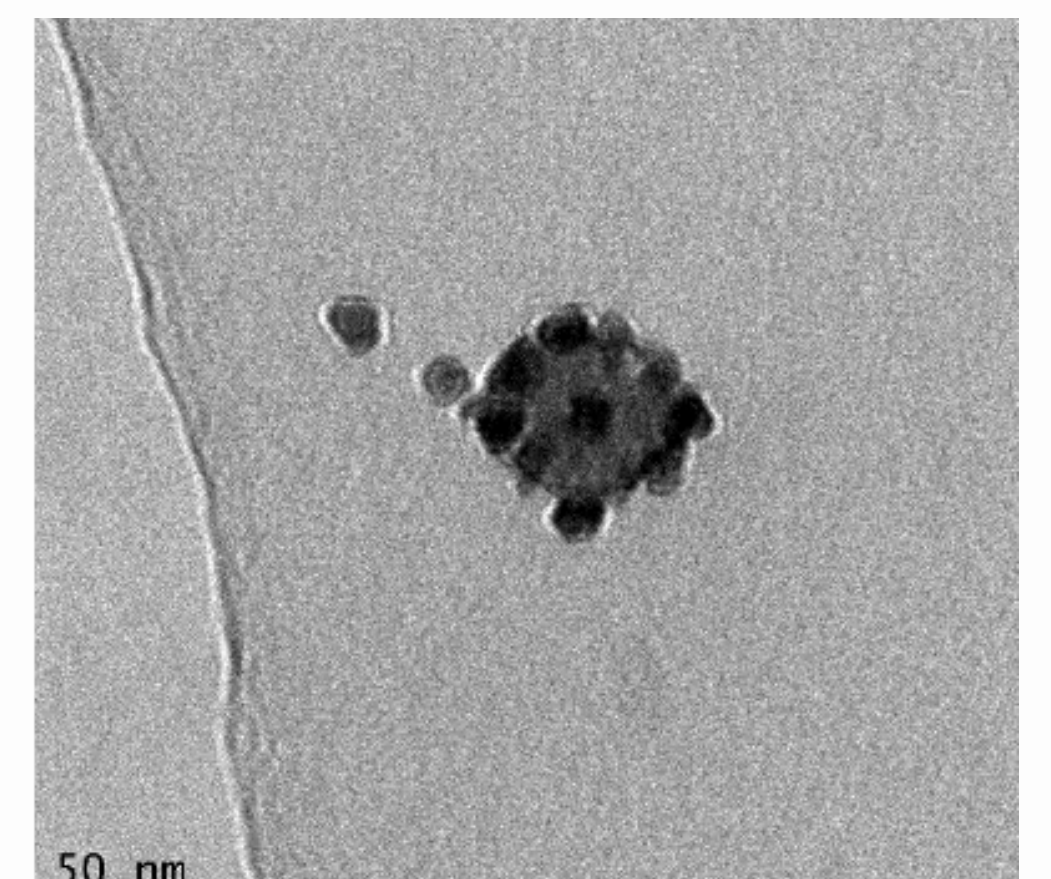
## APPLICATION OF INVENTION

These matrices show great promise in improving skin regeneration, reducing oxidative stress, and offering effective treatment for inflammatory conditions and skin aging. By ensuring a controlled release of active ingredients, these matrices provide a stable and efficient method of delivering adaptogens across the skin barrier. The tested materials can find applications in dermatology.

## RESULTS



Protein nanoparticles



Nanocarriers combined with active substance

## ACKNOWLEDGEMENTS

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