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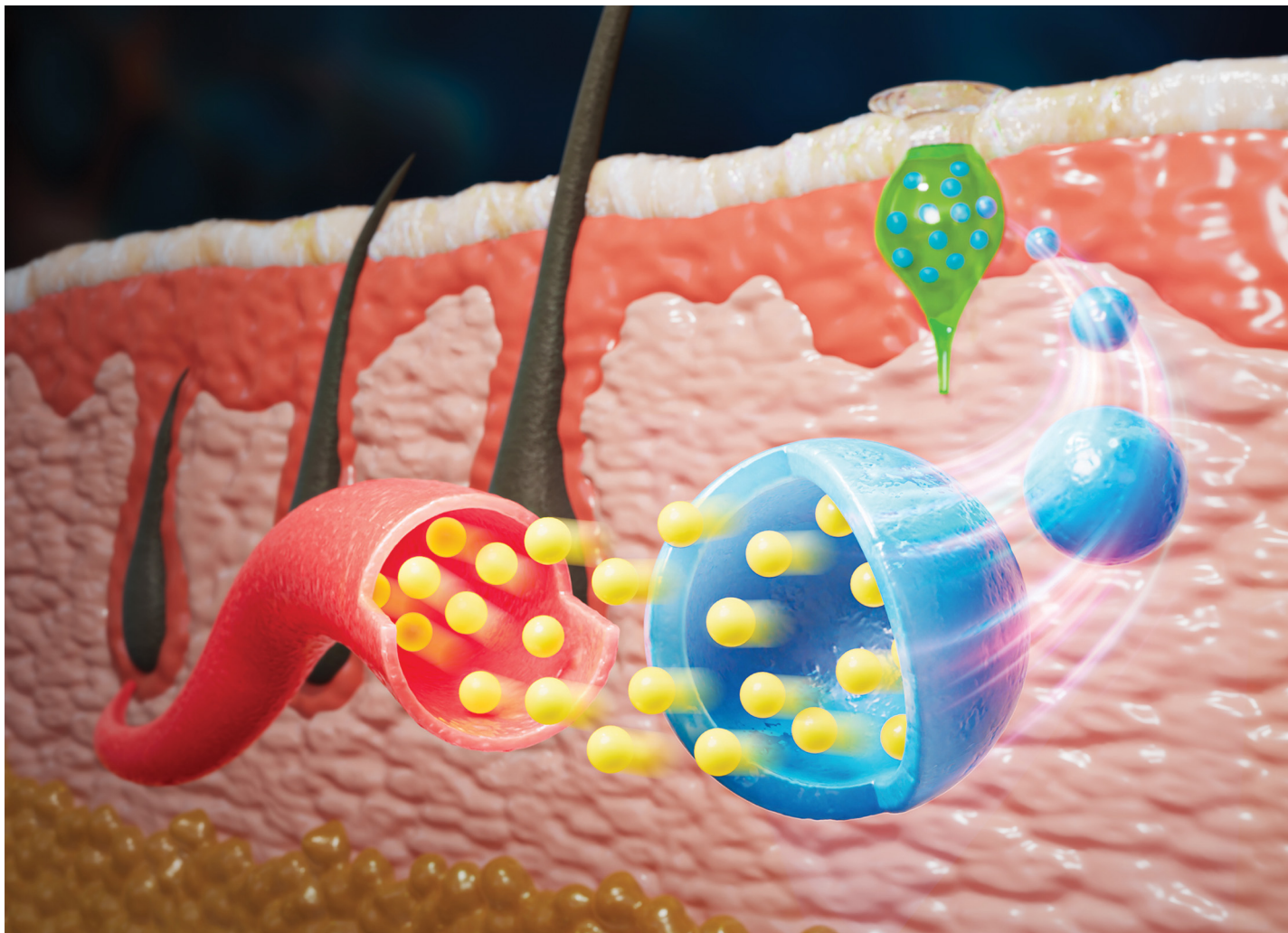
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Showcasing research from Professor Hyungil Jung's laboratory, Department of Biotechnology, Yonsei University, Republic of Korea and TOPADUR Pharma AG, Switzerland.

Patient-convenient long-term alopecia treatment via PLGA microsphere-loaded candlelit microneedles

Androgenetic alopecia (AGA) causes progressive hair loss and psychological distress. Existing treatments have low bioavailability and side effects. This study introduces candlelit microneedles (CMNs) combined with PLGA microspheres encapsulating the nitric oxide-releasing vasodilator TOP-M119 for sustained delivery. CMNs overcome hair related application issues without adhesive patches. *In vivo* results show enhanced hair growth and reduced dosing frequency, suggesting improved efficacy and patient compliance over conventional therapies.

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As featured in:



See Reto Naef, Hyungil Jung *et al.*,
J. Mater. Chem. B, 2025, **13**, 5789.