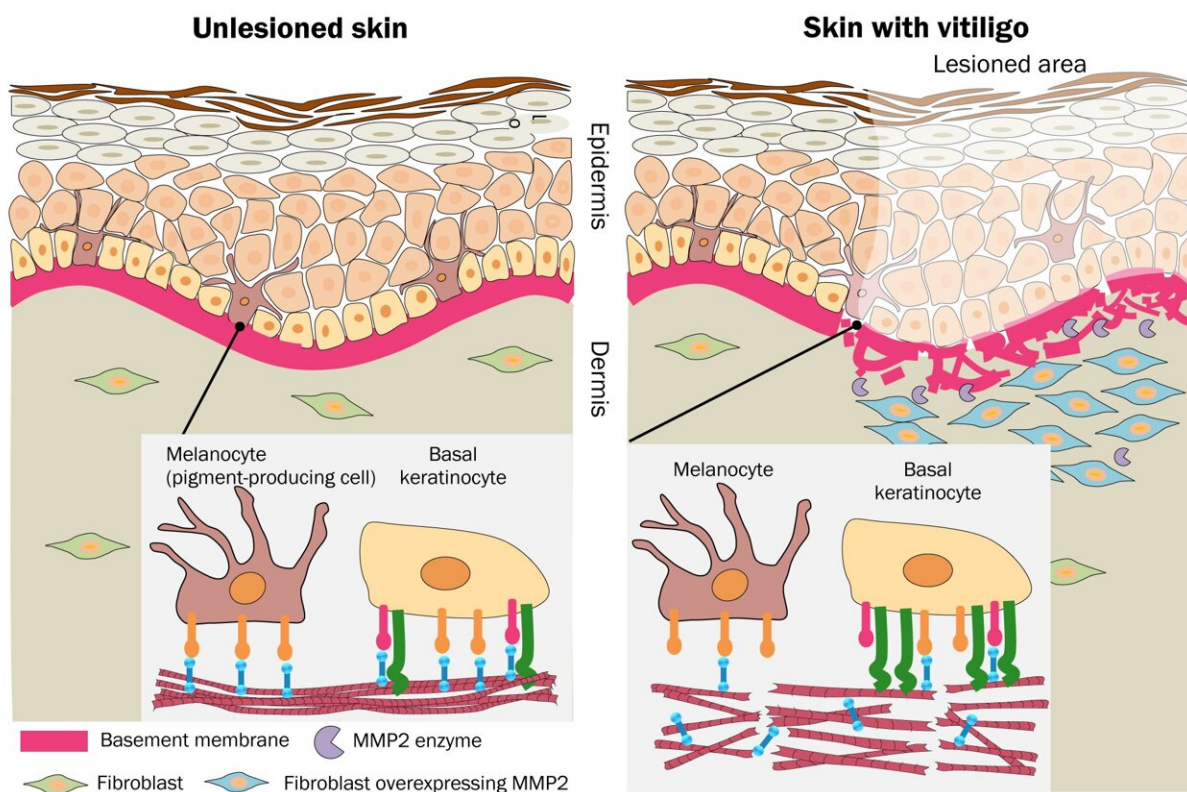


Vitiligo: Loss of skin's pigment-producing cells could be related to basement membrane disruption

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A graphical representation illustrates what might be occurring in undamaged and damaged skin. Credit: Osaka Metropolitan University

Skin pigmentation disorders affect people across the world. One of

them, vitiligo, is said to have a worldwide incidence of 1–2%. What causes the loss of pigmentation in vitiligo has long been unclear, but an Osaka Metropolitan University-led team has uncovered clues to the mechanism behind the disorder.

In findings published in [*The Journal of Pathology*](#), Graduate School of Medicine Specially Appointed Associate Professor Lingli Yang, the corresponding author, and researchers including Specially Appointed Professor Ichiro Katayama found that disruptions to the [basement membrane](#) zone between the [epidermis](#) and dermis could be making it harder for pigment-producing cells to adhere to the affected zone.

They also discovered an overexpression of an enzyme in vitiligo-affected skin. Too much of this enzyme, [matrix metalloproteinase 2](#) (MMP2), might be causing the disturbance to the basement membrane.

An experiment using model mice with vitiligo-like depigmentation showed recovery of pigment-producing cells when MMP2 was suppressed.

"The results of this study potentially provide a new method for the treatment of vitiligo," Professor Yang suggested. "In particular, by suppressing MMP2, the hope is that pigment-producing cells will return to the skin."

More information: Fei Yang et al, Disorganisation of basement membrane zone architecture impairs melanocyte residence in vitiligo, *The Journal of Pathology* (2024). [DOI: 10.1002/path.6321](https://doi.org/10.1002/path.6321)

Provided by Osaka Metropolitan University

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