

How does a frog heal wounded skin without scarring?

June 16 2017

When a *Xenopus* frog is deeply wounded, its skin can regenerate without scarring. Researchers have found that cells under the skin contribute to this regeneration after an excision injury.

Characterizing the subcutaneous [cells](#) that contribute to skin regeneration in amphibians may lead to insights on how to coax [human cells](#) to replace damaged skin without scarring. This could have important implications for improving quality of life after serious skin wounds from [traumatic injuries](#), burns, surgeries, and diseases.

"It was an unexpected result that cells outside of skin contribute to skin regeneration. These cells may be the key to understanding why amphibians can regenerate skin after deep injury without scar formation," said Dr. Hitoshi Yokoyama, senior author of the *Developmental Dynamics* study. "This finding raises important questions such as: are there similar cells in human beings and how are these cells different from scar-forming cells?"

More information: Rina Otsuka-Yamaguchi et al. Cells from subcutaneous tissues contribute to scarless skin regeneration in frogs, *Developmental Dynamics* (2017). [DOI: 10.1002/dvdy.24520](https://doi.org/10.1002/dvdy.24520)

Provided by Wiley

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