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Scientists in Australia grow living skin in world-first

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Transformative for skin graft transplants, wound healing and studying skin disorders



Australia's University of Queensland (UQ) researchers have been the first in the world to successfully grow fully functioning human skin in a laboratory.

The research team at UQ’s Frazer Institute used stem cells to create a replica of human skin, complete with blood vessels, capillaries, hair follicles, layers of tissue and immune cells.

Dr Abbas Shafiee said the skin model, that was 6 years in the making, would be transformative for skin graft transplants, wound healing and studying skin disorders. Dr Shafiee, who conducted the study in collaboration with Metro North Health, said recent advancements in stem cell research allowed them to create 3-dimensional skin lab models.

Professor Kiarash Khosrotehrani said the engineered skin would help improve skin graft transplants and treatments for inflammatory skin disorders such as psoriasis, atopic dermatitis, scleroderma and other genetic diseases.

“This skin model will enable us to further progress those treatments, along with wound healing, regenerative medicine and precision dermatology. Skin disorders can be difficult to treat, and it’s a real breakthrough to be able to provide hope for people living with chronic conditions”, added Professor Kiarash Khosrotehrani.

Image caption- Dr Abbas Shafiee (left) and Professor Kiarash Khosrotehrani from UQ's Frazer Institute in the lab.

(Photo credit: The University of Queensland)