



**Transforming skin research with  
our highly predictive *ex vivo*  
human skin models**



## Index

Mission - transforming skin research	3
TenSkin™	5
Mimics <i>in vivo</i> response	7
Realistic wound healing model	9
Response to pollution	11
Immunocompetent skin model	13
Photobiology	15
Skin rejuvenation	17
Ten Bio team	19

## **Mission**

### Transforming skin research

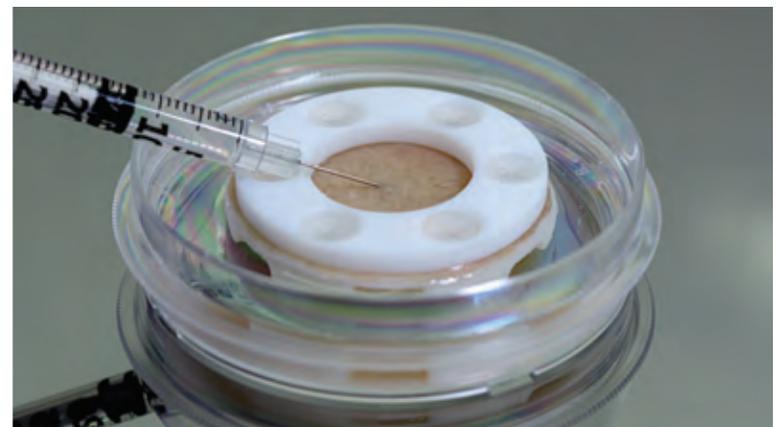
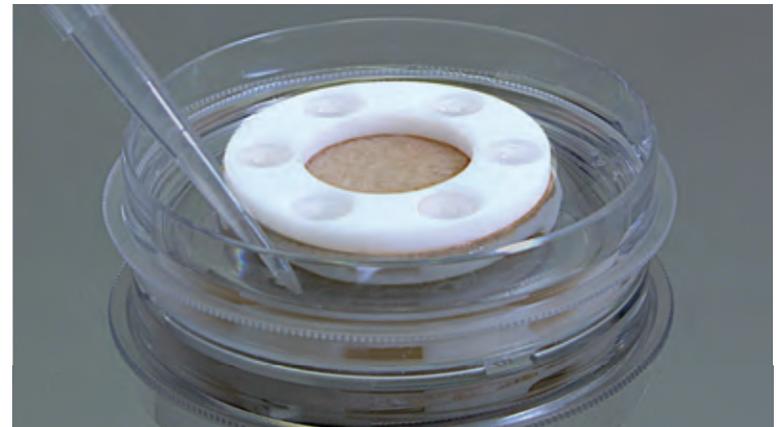
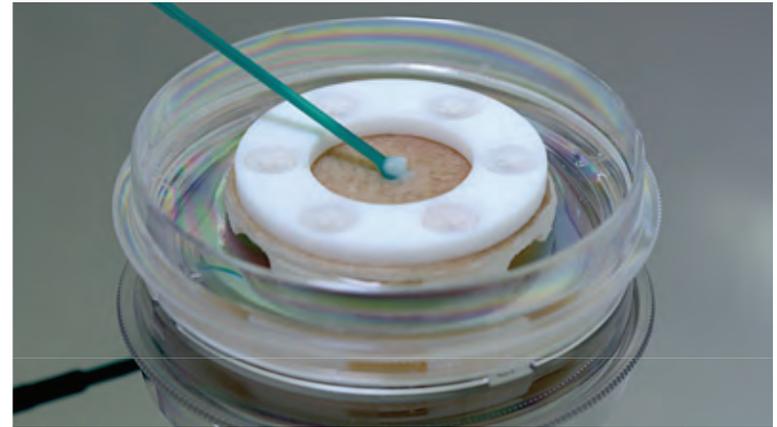
Ten Bio provides optimal human skin models for skin biology testing. By restoring and maintaining physiological skin tension using our unique culture platform, Ten Bio has succeeded in creating a truly functional and realistic testing platform for skin-based research. Our products and research services help generate exacting and clinically relevant data to more accurately predict product performance *in vivo*. Ten Bio can significantly lower R&D costs and accelerate product development.



## TenSkin™

Optimal tension for optimal results

Mechanical tension plays a vital role in organ and tissue morphology and function. Ten Bio's unique TenSkin™ culture system allows real human skin to be cultured at physiological tension, which assures a normal and realistic tissue response. This enables evaluation of a broad range of responses over longer durations and more accurately than in other systems, allowing research teams to make more informed decisions at every stage of R&D. Better decisions drive better results, rapid progress, and lower costs.

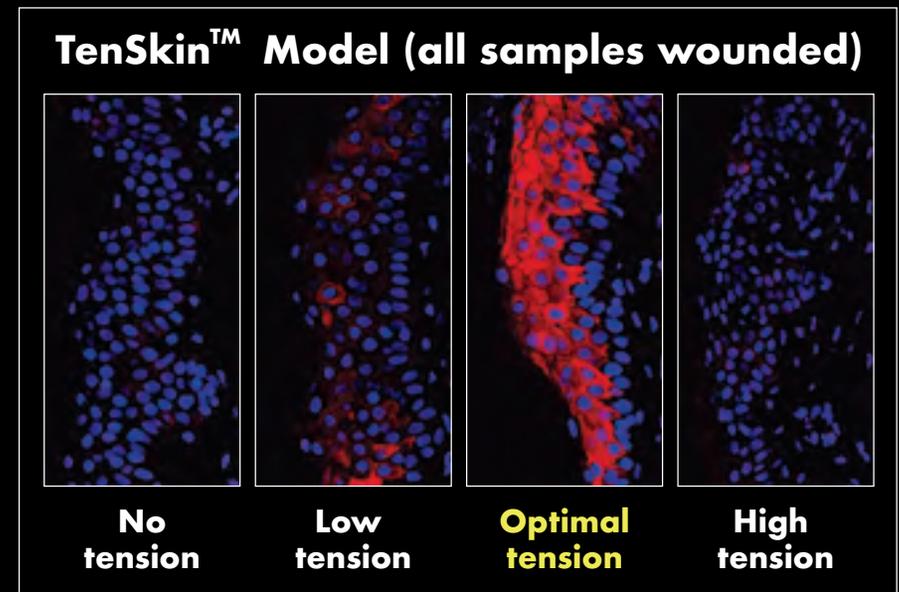
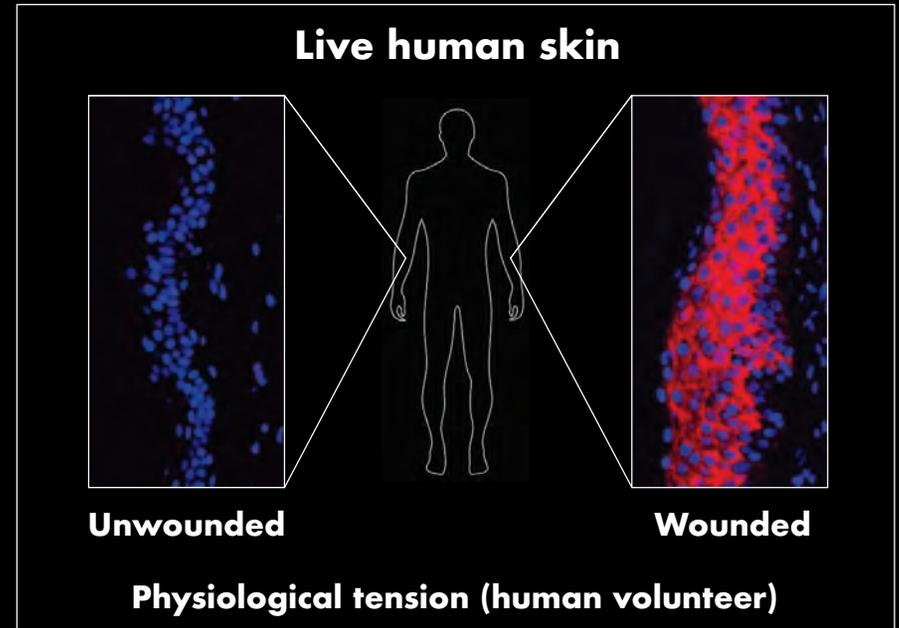


## TenSkin™

Mimics *in vivo* response

TenSkin™ is full-thickness human skin with complete dermal and epidermal layers, appendages, and minor skin cell populations. By restoring skin's inherent mechanobiology, our unique culture system retains skin's physiological complexity, metabolic activity, and structural integrity.

Optimal mechanical tension allows TenSkin™ to mimic complex biological processes (e.g. response to wounding). The following page illustrates virtually identical expression levels of wound healing proteins (shown in red) when directly compared to the wounded skin of a human volunteer.



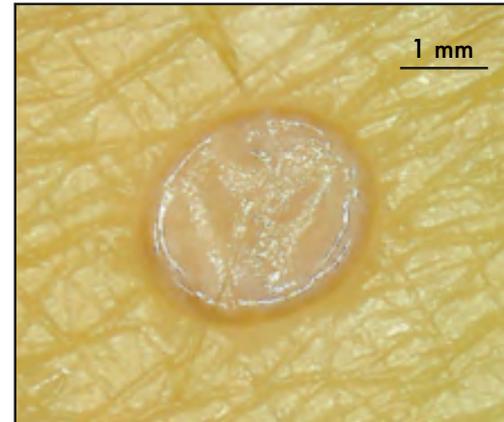
# TenSkin™

## Realistic wound healing model

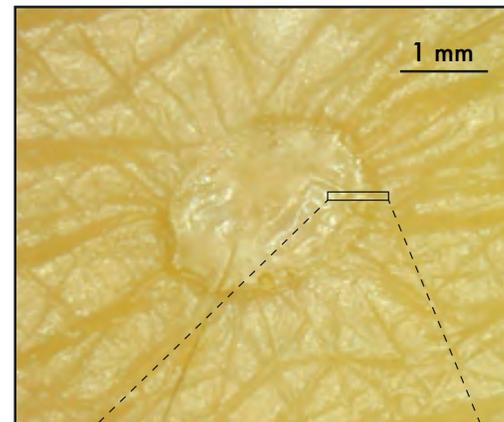
TenSkin™ is cultured at optimal tension to enable *in vivo* - like wound response and healing. TenSkin™ is compatible with a variety of wounding methods, including chemical, burn, laser ablation, and traditional biopsy wounding. Shown opposite is a partial-depth 2 mm biopsy wound, which fully healed in 5 days.

TenSkin™ facilitates the investigation of all stages of wound healing, including initial wound response, inflammation, wound contraction, re-epithelialization, and barrier formation.

Fresh 2 mm biopsy wound (day 0)



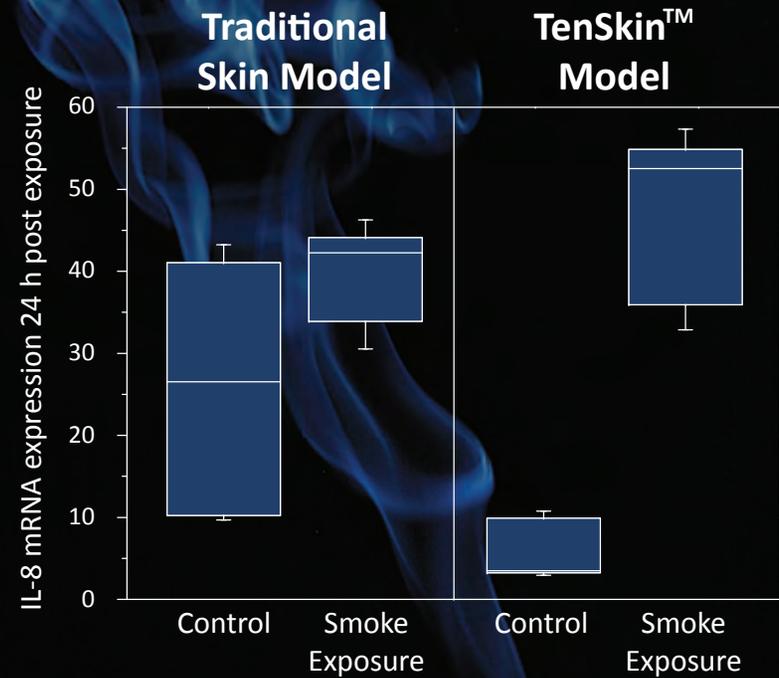
Healed 2 mm biopsy wound (day 5)



## Response to pollution

Reliable results for better outcomes

Due to the optimal tension at which TenSkin™ is cultured, it outperforms traditional *ex vivo* models when assessing the response of skin to pollutants. Culturing skin tissue using traditional techniques often leads to a stress response even without treatment (shown here as elevated cytokine expression). However, culturing skin at physiological tension maintains the tissue in a normal state, thus providing a reliable testing platform capable of showing greater differentiation between control and test data. TenSkin™ is the ideal platform for generating the data required to support pollution protectant claims.

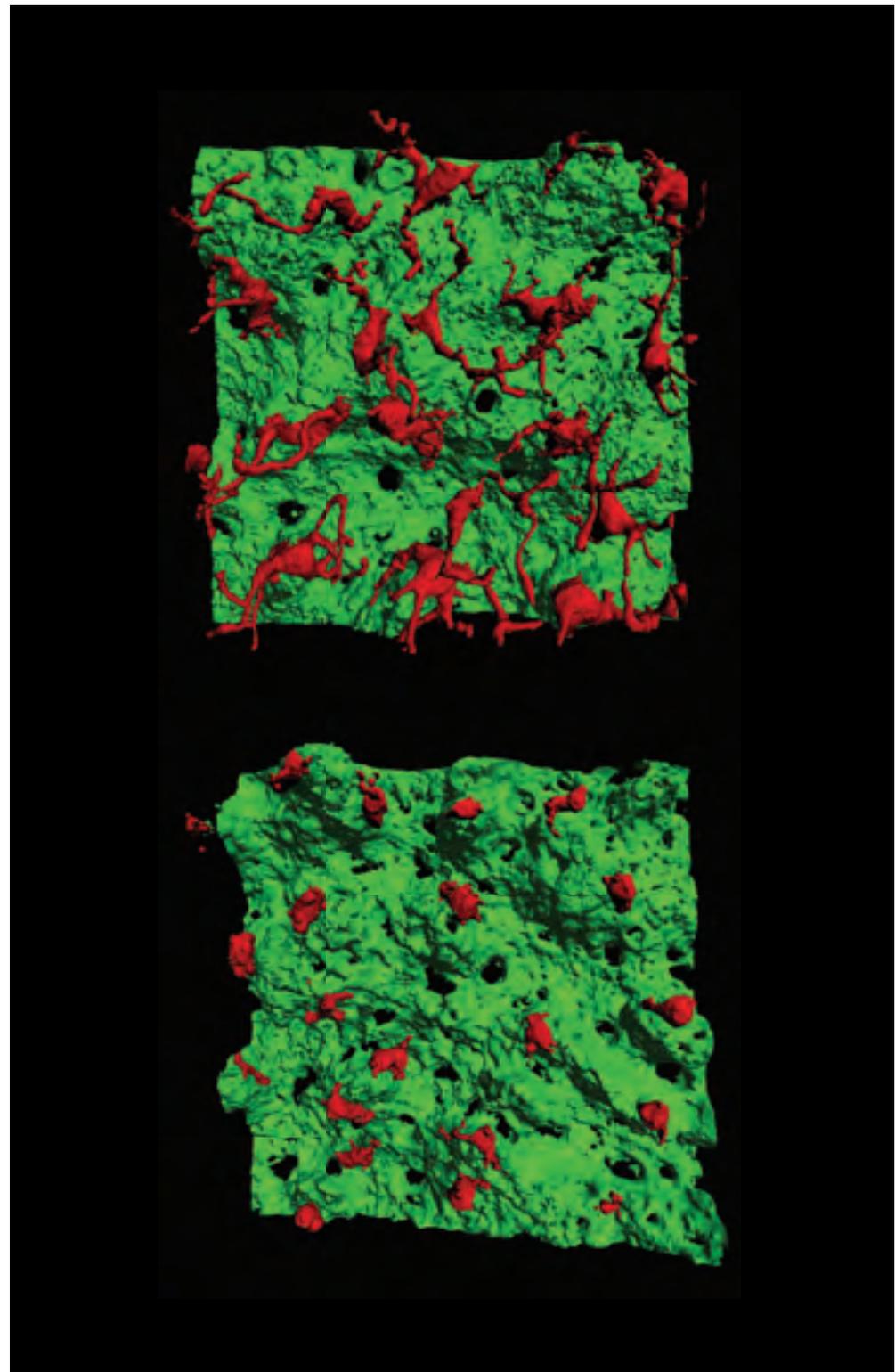


## Sensitization

### Immunocompetent skin model

Compared to traditional models, the intact mechanobiology of TenSkin™ maintain the skin's resident immune cells, allowing in-depth multi-parameter assessments of immune response.

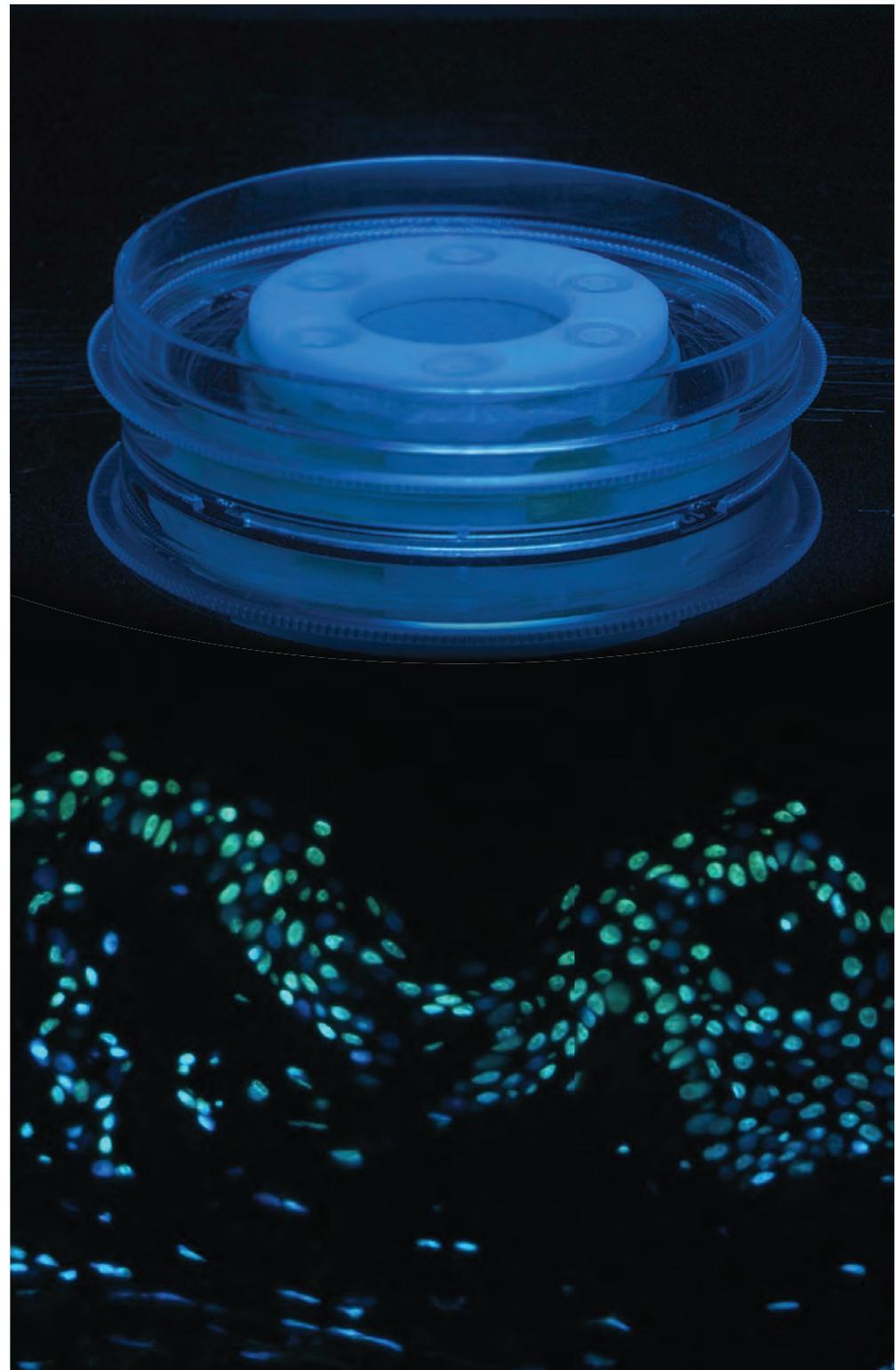
Ten Bio's advanced imaging capabilities provide enhanced data for assessing dendritic cell maturation and migration. This full range of state-of-the-art microscopy and image analysis techniques can be deployed to address a broad and sophisticated spectrum of research inquiry.



## Photobiology

Broad testing capabilities

Ten Bio offers a broad range of UV and visible light exposure assays, including UVC, UVB, UVA, and solar simulation for applications, including basic skin biology, phototherapies, and UV protection claims. With TenSkin™, it is possible to evaluate a diverse set of readouts, such as DNA damage, tissue damage, oxidative damage, and markers of aging.

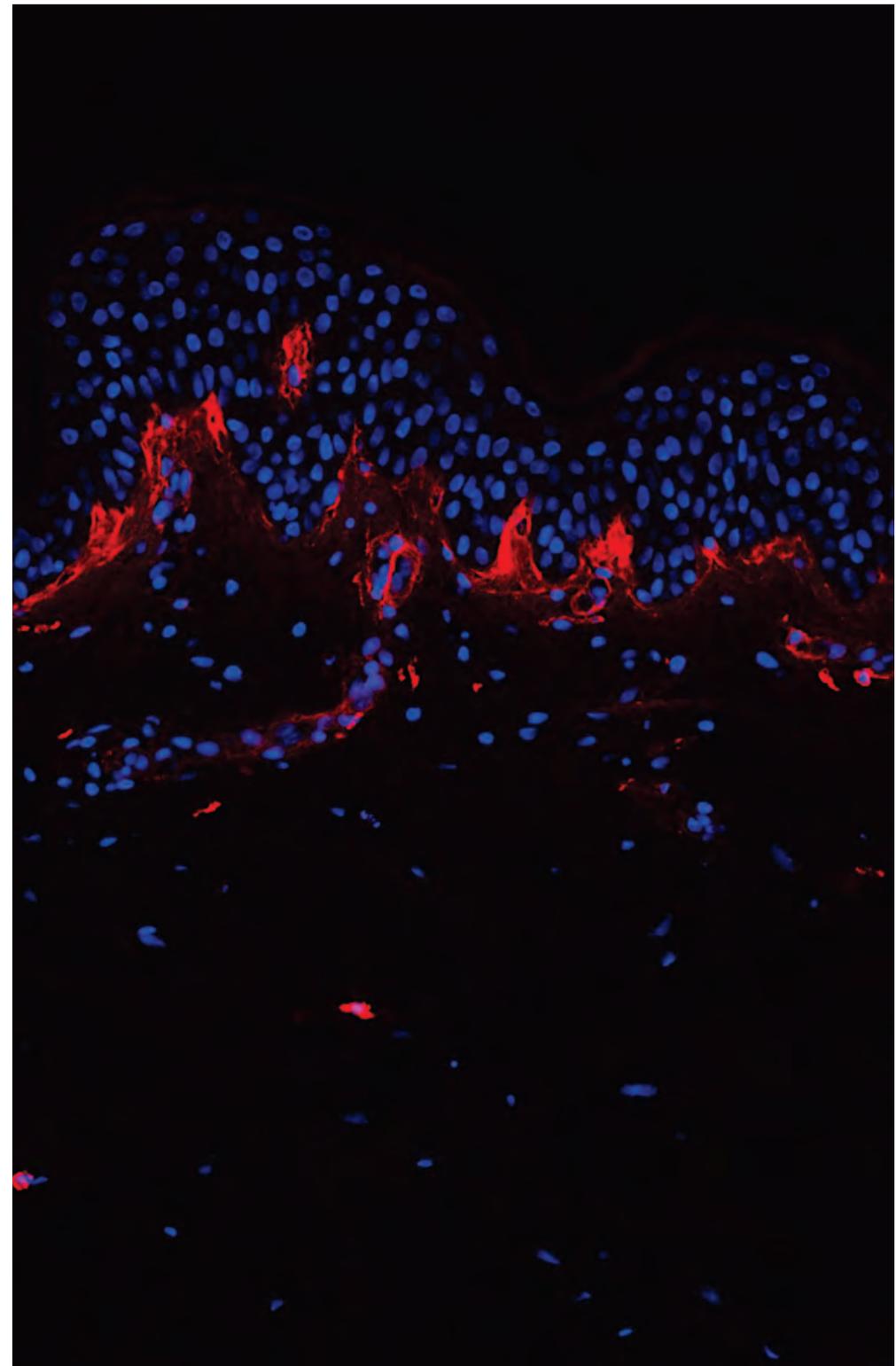


## **Skin rejuvenation**

Evaluate efficacy and MOA

With extended cultured periods beyond two weeks, TenSkin™ is ideally suited for evaluating skin regeneration and dermal remodeling (e.g. inhibition of collagen breakdown and stimulation of new collagen synthesis).

Ten Bio works with an established network of surgical clinics to obtain fully-consented tissue from a broad range of donor age groups and all Fitzpatrick skin types, providing custom solutions to support even the the most complex R&D needs.



## Ten Bio team

Multi-disciplinary expertise

We are a passionate team of biologists, physicists, and engineers, each bringing a unique and complementary set of skills that enable delivery of our leading-edge products and research services. Our clients and research partners receive a wealth of support from their earliest engagement with Ten Bio, delivering improved:

- Prediction of clinical trial outcomes
- Efficacy of R&D programs
- Understanding of compound impact
- Product development processes

Get in touch today to find out how we can enhance your R&D programs to enable delivery of your research goals.

[robyn.hickerson@ten-bio.com](mailto:robyn.hickerson@ten-bio.com)  
[michael.conneely@ten-bio.com](mailto:michael.conneely@ten-bio.com)



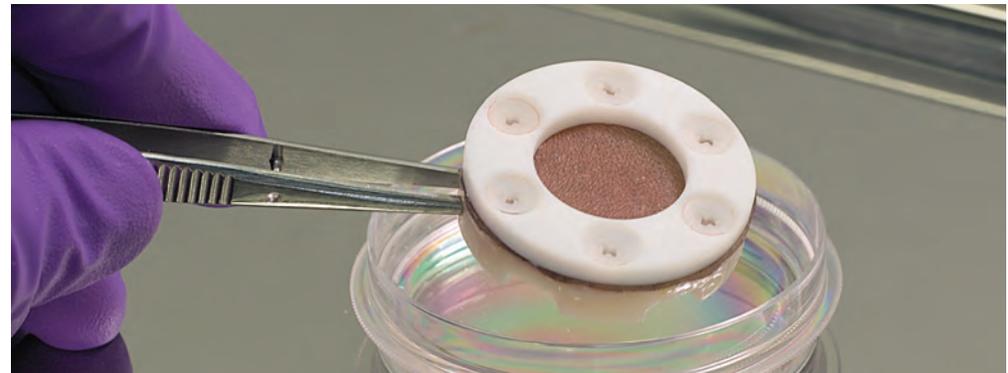
Robyn Hickerson  
Founder & CEO

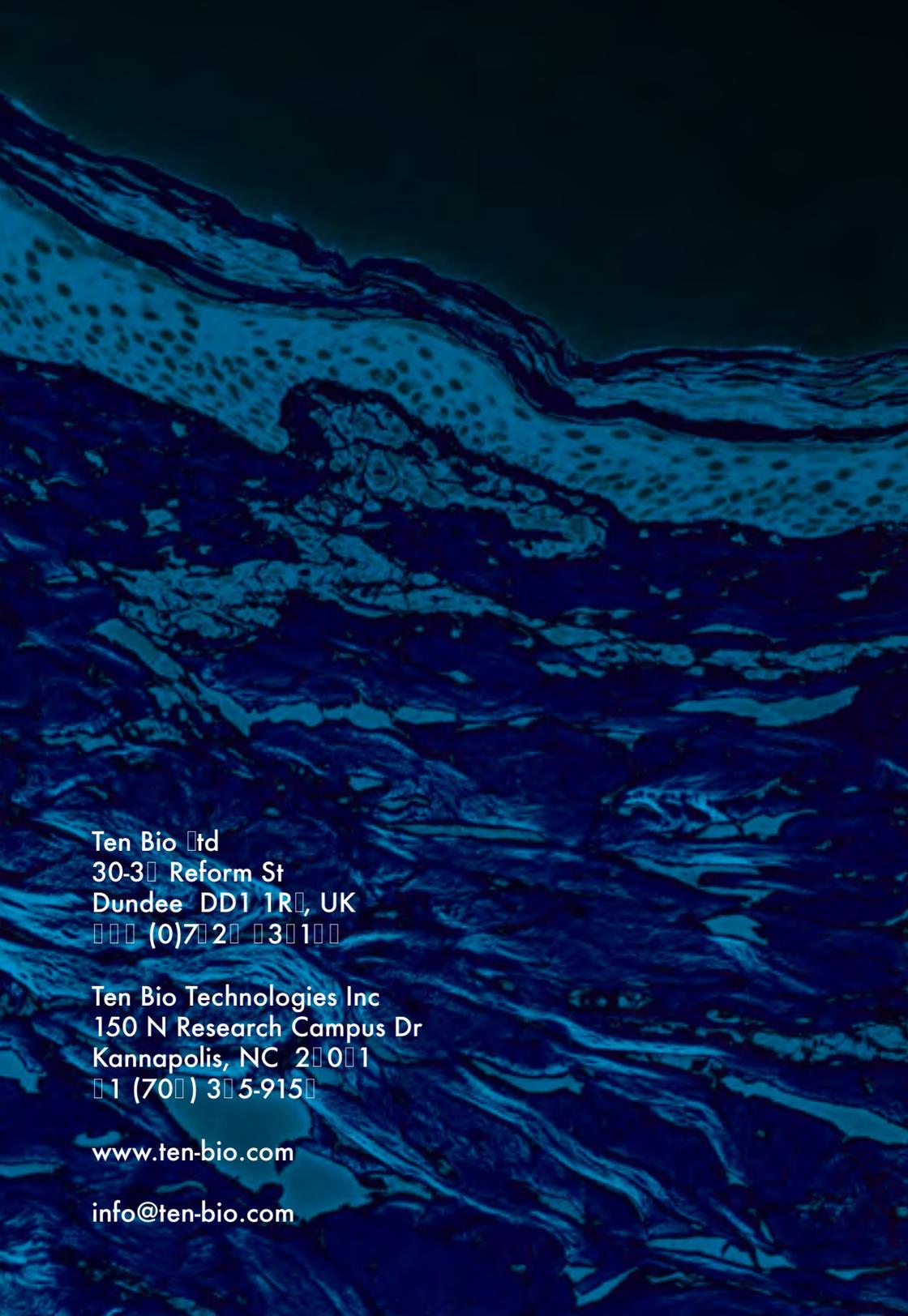


Michael Conneely  
Founder & COO



Ken Fyvie  
Chairman



A detailed microscopic image of skin tissue, showing the epidermal layer with its characteristic wavy, undulating surface and the underlying dermal layer with its complex, fibrous structure. The image is rendered in a monochromatic blue color scheme, highlighting the intricate patterns and textures of the biological tissue.

Ten Bio Ltd  
30-31 Reform St  
Dundee DD1 1RQ, UK  
Tel: (0)7720 331100

Ten Bio Technologies Inc  
150 N Research Campus Dr  
Kannapolis, NC 28001  
Tel: (703) 335-9150

[www.ten-bio.com](http://www.ten-bio.com)

[info@ten-bio.com](mailto:info@ten-bio.com)