VitroScreenORA®
A Visionary Future of Human Health

DERMIS

The dermis system recapitulates human dermal stroma in healthy condition in terms of tissue architecture and *de-novo* extracellular matrix assembly. Due to the highest biological relevance, the model mirrors the physiological aging process during the time of culture, preserving phenotype characteristic of the donor's cells.

Vascularized dermis: a co-culture with human primary microvascular endothelial cells is developed as customized system.

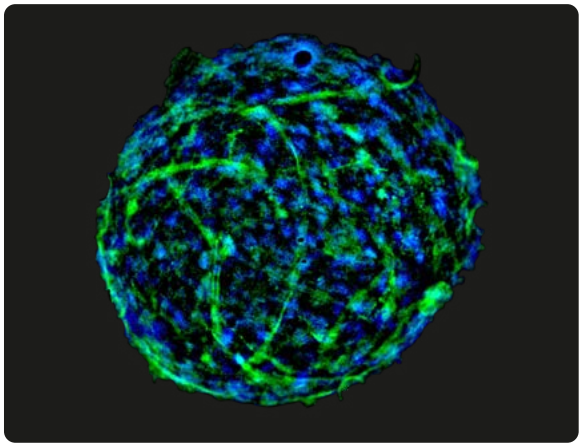
Applications

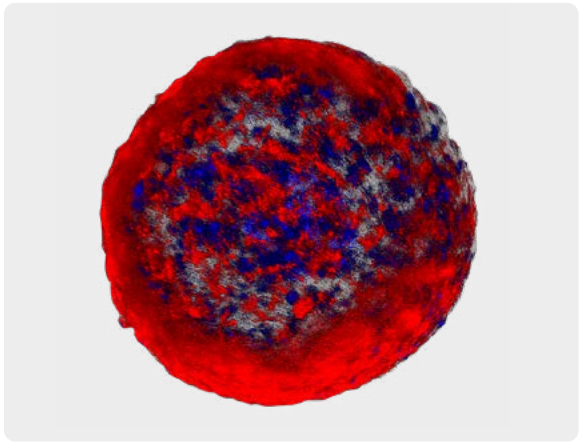
- To mirror intrinsic (during culture) and extrinsic (UVA induced) aging
- To model dermis disorders as fibrosis, pro-inflammatory status or oxidative stress
- To investigate hypoxia effects and glycation
- Dermis metabolism and detoxification
- Neo angiogenesis and modification to vascular branches network
- Inflammatory model in co-culture with adipose system

Cell source:
primary human dermal fibroblasts: donor's specific tissue

Shelf life:
up to 4 weeks

Relevance:
increase of collagen fibres amount and thickness during tissue assembly and dynamic evolution of ECM features according to natural senescence and donor's age.





COL III Nuclei CD31

Articles

Gilda Aiello, Francesca Rescigno, Marisa Meloni, Beatrice Zoanni, Giancarlo Aldini, Marina Carini and Alfonsina D'Amato
The Effect of Carnosine on UVA-Induced Changes in Intracellular Signaling of Human Skin Fibroblast Spheroids
Antioxidants 2023, 12, 300 *https://doi.org/10.3390/antiox12020300*

Gilda Aiello, Francesca Rescigno, Marisa Meloni, Giovanna Baron, Giancarlo Aldini, Marina Carini and Alfonsina D'Amato
Oxidative Stress Modulation by Carnosine in Scaffold Free Human Dermis Spheroids Model: A Proteomic Study
International Journal of Molecular Sciences 2022, 23, 1468 *https://doi.org/10.3390/ijms23031468*

Francesca Rescigno, Laura Ceriotti, Marisa Meloni
Extra Cellular Matrix Deposition and Assembly in Dermis Spheroids
Clinical, Cosmetic and Investigational Dermatology 2021:14 935–943

Posters

M. Meloni, F. Rescigno, E. Caviola, G. Aiello, A. D'Amato and M. Carini
An Advanced Micro Physiological System for Dermatological applications
Poster ISID 2023, Tokio, 10-13.05.2023

Ceriotti Laura, Caviola Elisa, Meloni Marisa, Carriero Francesco
3D scaffold free micro-dermis model: an innovative tool to explore dermal matrix remodeling
Poster IFSCC 2019, Milan Italy

VitroScreen S.r.l. | Testing Facilities and Headquarter: Via Mosè Bianchi, 103 – 20149 – Milano – Italy | infos@vitroscreen.com www.vitroscreen.com