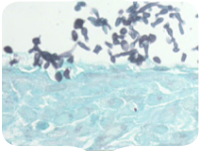


A vertical fluorescence microscopy image showing a column of cells. The cells are stained with a red dye, likely highlighting the cytoplasm or membranes, and a blue dye, likely DAPI, which stains the nuclei. The cells are arranged in a somewhat regular, vertical column, with some appearing more elongated than others. The background is dark, making the red and blue signals stand out.

VitroScreen EXPERTISE ON MICROBIOME:

commitment to provide scientific
evidences for new generation products

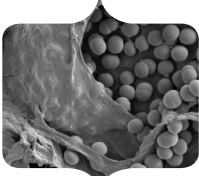
VitroScreen
within its mission for
**excellence in
in vitro science** has
developed specialized
3D reconstructed
human skin and
mucosae models
colonized with site
specific associated
microbiome
and yeasts.



MICROBIOTA MODULATES CUTANEOUS AND MUCOSAL RESPONSE

Microbiota colonized skin and mucosae models allow to explore microbe-host interaction mechanisms and to quantify tissue response against pathogens.

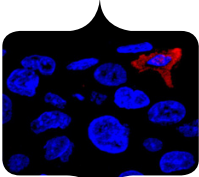
GMS staining on 3D human reconstructed epithelium colonized by *Candida albicans*



BACTERIAL AND YEAST ADHESION AND BIOFILM FORMATION

Colonized tissue models enable to investigate microbial species proliferation, adhesion, growth, toxicity and biofilm formation thanks to a Multiple Endpoint Approach (MEA).

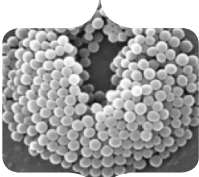
SEM analysis of *S.aureus* invading the surface of a skin with impaired barrier



PROBIOTICS, PREBIOTICS AND POSTBIOTICS EFFICACY

3D models co-culture with immune-competent cells: a unique tool to assess innate and adaptive immuno-mediated responses induced by bacteria and bacterial components.

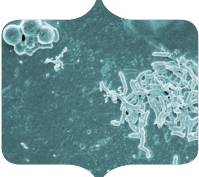
THP 1 cells infiltrated in RHE-CMM inserts and differentiated (CD86 IF staining)



SKIN MICROBIOTA: *S. epidermidis* and *S. aureus*

Competition models between commensal species interacting with opportunistic pathogen members of the microbiota are fundamental to explore the mechanisms by which a product can modulate bacterial behavior on skin surface.

SEM image of reconstructed epidermis surface previously colonized by *S. epidermidis* where *S. aureus* is no more able to form a biofilm.



RECAPITULATING THE ROLE of SCALP MICROBIOTA

In a realistic scalp model in presence of sebum, supporting dandruff condition, *P. acnes* has been shown to counteract the invasion of *M. restricta*.

SEM analysis of co-colonization with *P. acnes* and *M. restricta*

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