REACT4LIFE

mirroring human complexity

Where we are:

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mirroring human complexity

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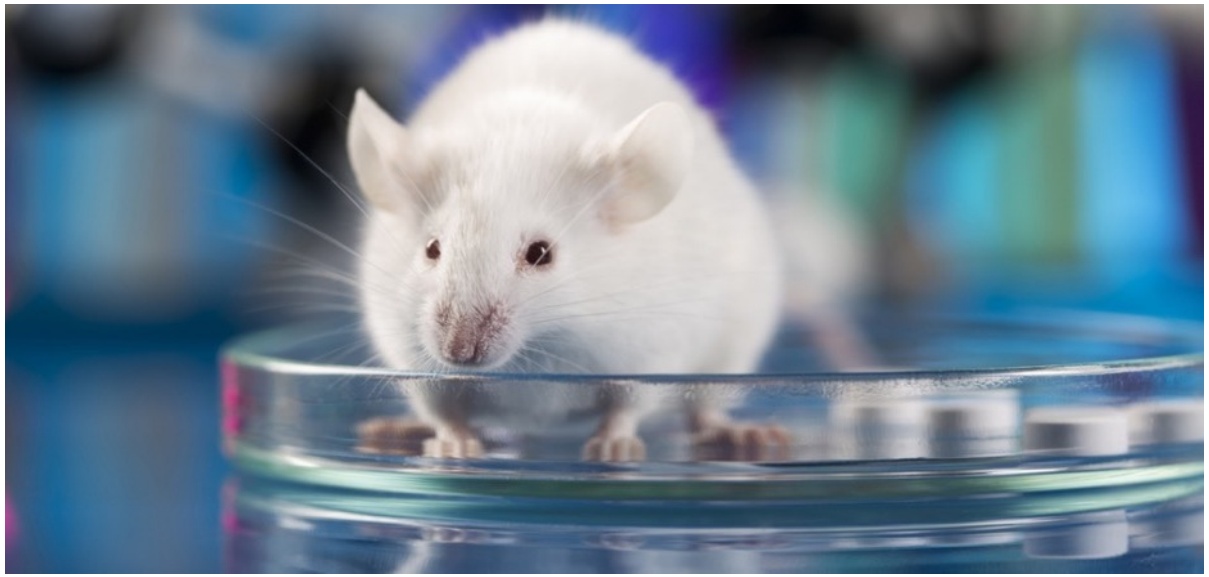
We dream about…



Human biology is different

Boosting human disease knowledge

Testing new therapeutic approaches

Accelerating personalized medicine

That's why

we provide technological solutions to accelerate biomedical research

MIVO: Multi In Vitro Organ

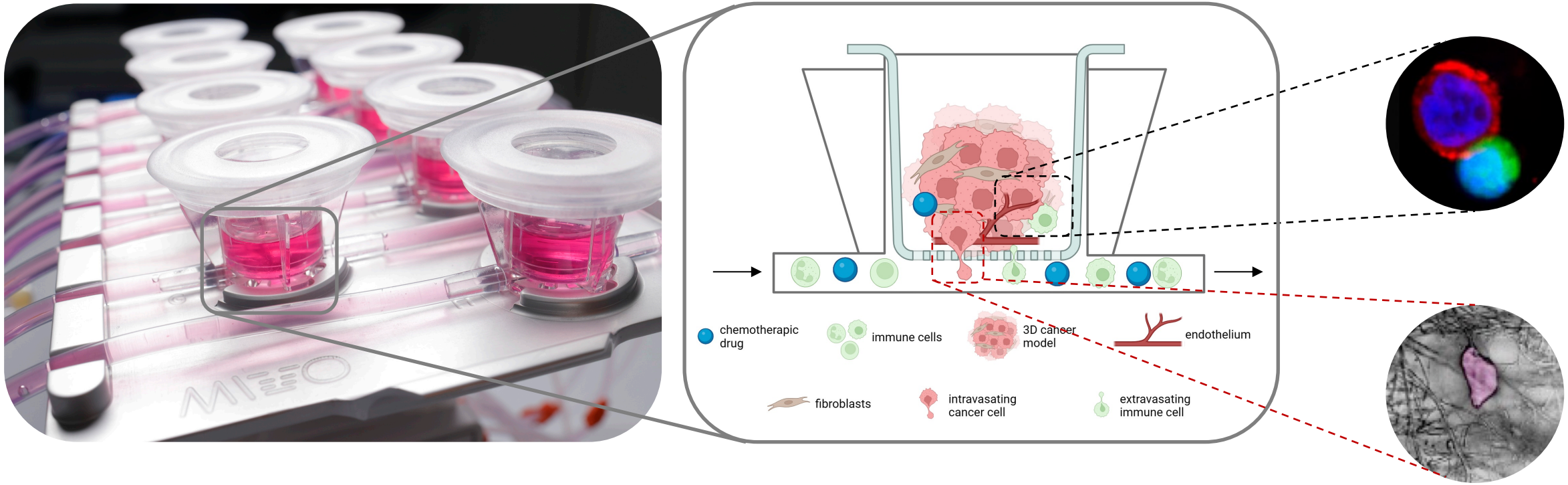
2021 Best Health Tech

Italian patent IT2017000004017; extension PCT/IB2018/050236 (USA, Canada, China, Japan, South Corea, Europa, Australia)

+20 years of R&D

to design this technology and recreate life in the lab

A *simple* device to resembling *complex* cell-cell interplays



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Advantages of MIVO® organ-on-chip technology

Physiological flow

For making tests more ***predictive***

3D tissues/patient biopsies

For increasing tests ***relevance***

Organ-Organ connections

For developing ***safer*** formulations

Easy cells/media sampling from upper & lower tissue culture

For more ***accurate*** outcomes

Compliant to standard cell culture

For ***easier*** molecules testing

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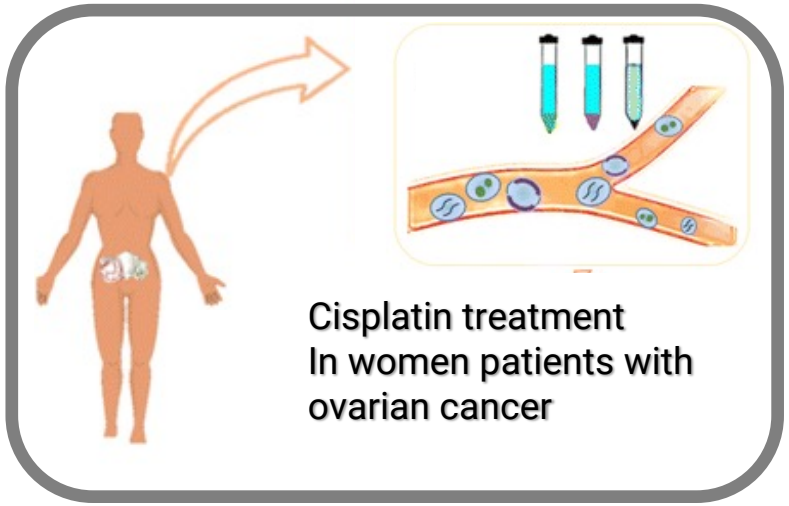
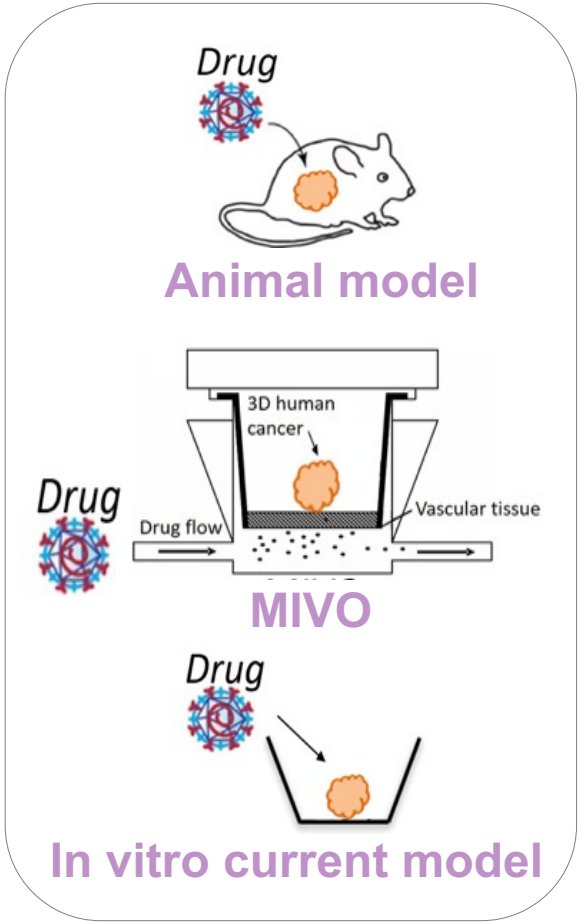
Alternative
Drug efficacy assay
By culturing 3D models within organ on chip platfoms





Research Article

3D Fluid-Dynamic Ovarian Cancer Model Resembling Systemic Drug Administration for Efficacy Assay

Alessandra Marrella[1], Gabriele Varani[1], Maurizio Aiello[2], Ivan Vaccari[1], Chiara Vitale[1], Martin Mojzisek[3], Cristina Degrassi[3] and Silvia Scaglione[1,2]

[1]CNR – National Research Council of Italy, IEIIT Institute, Genoa, Italy; [2]React4life S.r.l, Genoa, Italy; [3]MTTlab S.r.l, Trieste, Italy

- Cisplatin drug
- Ovarian SKOV3 cell line
- Measure of cells viability

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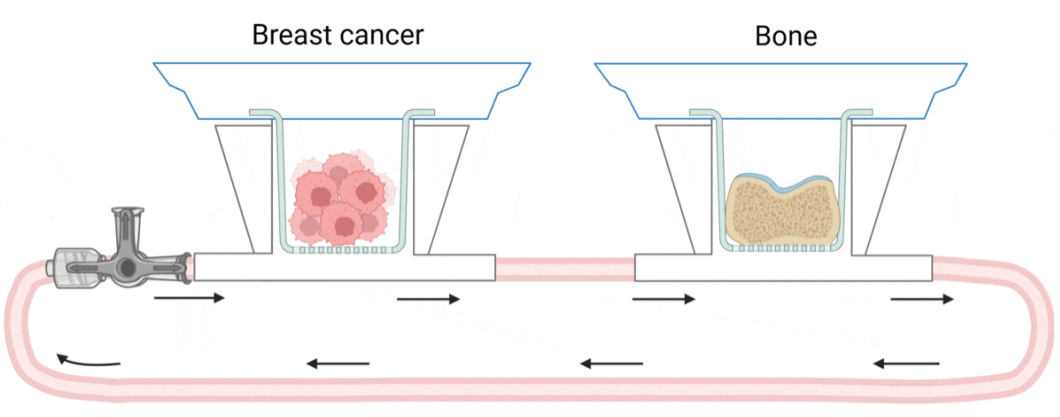
MULTI-ORGAN CANCER ON CHIP



APPLICATIONS

- Cancer metastasis assay
- PK assay
- PK-PD assay

SCIENTIFIC REPORTS

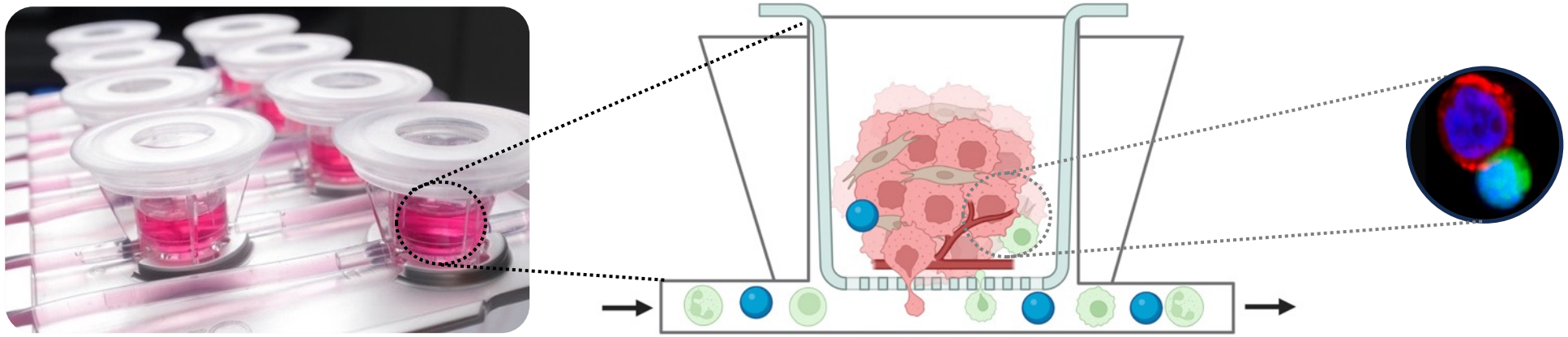
OPEN

Received: 2 October 2017
Accepted: 1 March 2018
Published online: 28 March 2018

A new cell-laden 3D Alginate-Matrigel hydrogel resembles human breast cancer cell malignant morphology, spread and invasion capability observed "*in vivo*"

Marta Cavo[1,2,3], Marco Caria[1,2], Ilaria Pulsoni[2], Francesco Beltrame[1,2], Marco Fato[1,2] & Silvia Scaglione[1]

IMMUNE ON CHIP



APPLICATIONS

- Immune response
- immunotherapies testing
- Inflammatory response

CANCER TISSUE MODELS

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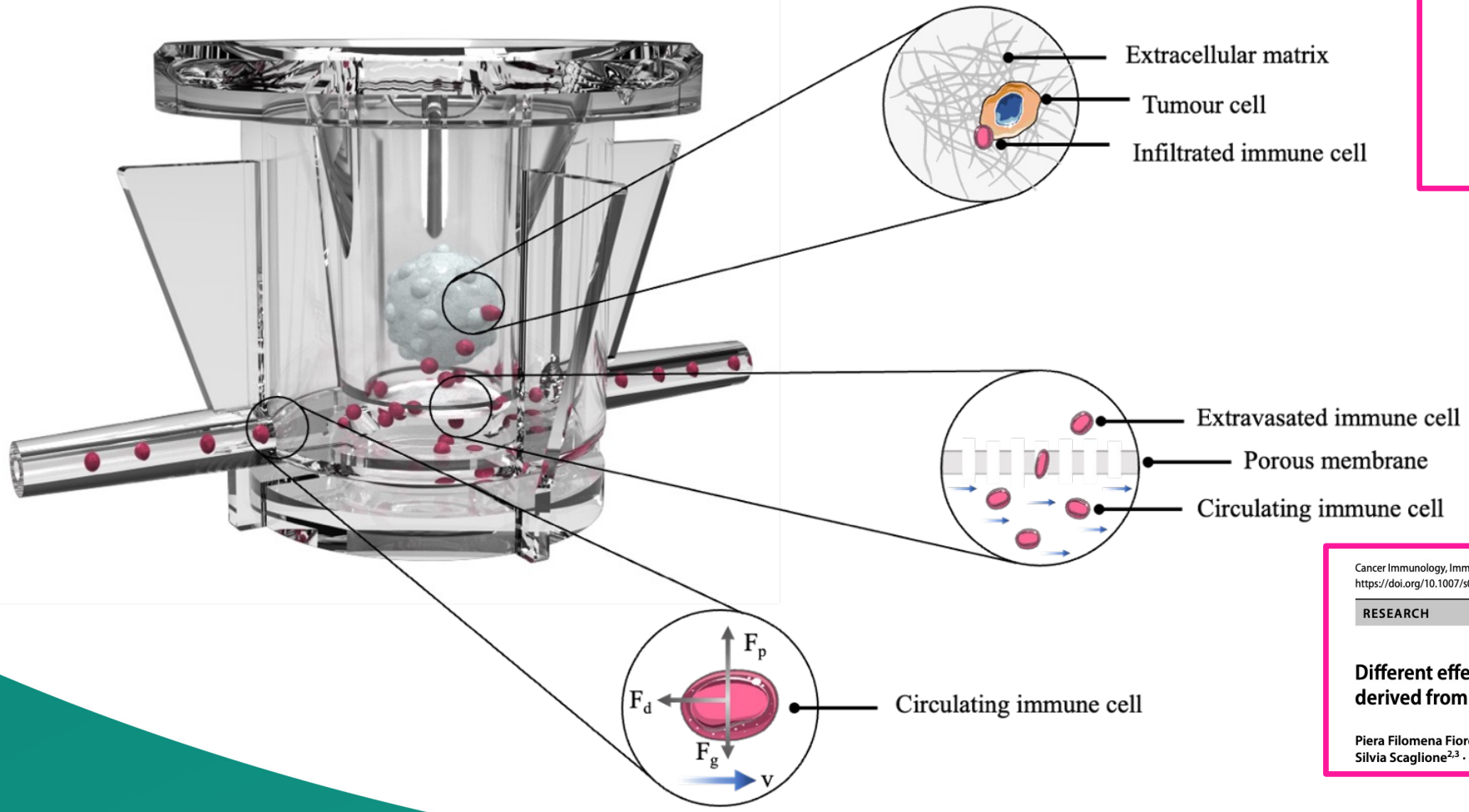
Immune cells infiltration assay



frontiers | Frontiers in Bioengineering and Biotechnology
TYPE Original Research
PUBLISHED 25 July 2022
DOI 10.3389/fbioe.2022.945149

A multi-organ-on-chip to recapitulate the infiltration and the cytotoxic activity of circulating NK cells in 3D matrix-based tumor model

Monica Marzagalli [1], Giorgia Pelizzoni [2], Arianna Fedi [3], Chiara Vitale [3,4], Fabrizio Fontana [5], Silvia Bruno [4], Alessandro Poggi [6], Alessandra Dondero [4,7], Maurizio Aiello [3], Roberta Castriconi [4,7], Cristina Bottino [4,7] and Silvia Scaglione [3]*

cancers
MDPI
Review

Tumor Microenvironment and Hydrogel-Based 3D Cancer Models for In Vitro Testing Immunotherapies

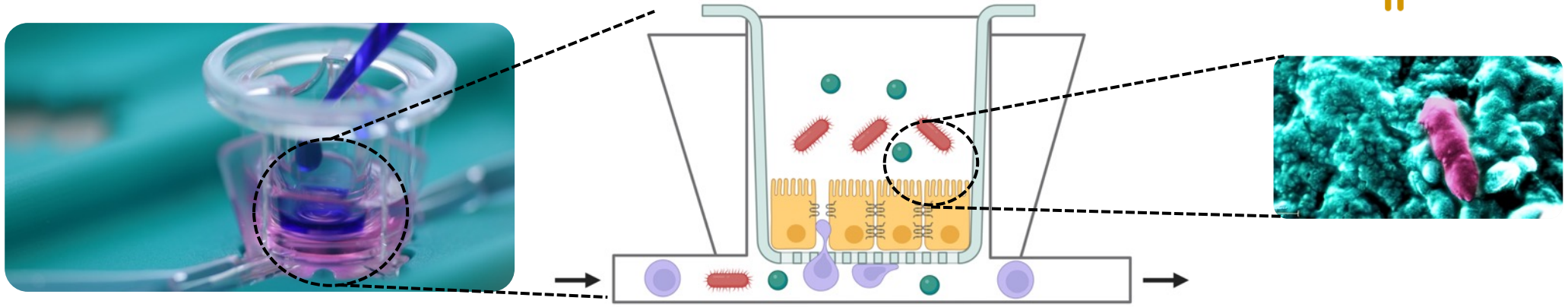
Chiara Vitale [1], Monica Marzagalli [2], Silvia Scaglione [2,3], Alessandra Dondero [1], Cristina Bottino [1,4,*] and Roberta Castriconi [1]

Cancer Immunology, Immunotherapy
https://doi.org/10.1007/s00262-022-03340-z
RESEARCH
Check for updates

Different effects of NK cells and NK-derived soluble factors on cell lines derived from primary or metastatic pancreatic cancers

Piera Filomena Fiore [1] · Anna Laura Di Pace [1] · Libenzio Adrian Conti [6] · Nicola Tumino [5] · Francesca Besi [1] · Silvia Scaglione [2,3] · Enrico Munari [4] · Lorenzo Moretta [1] · Paola Vacca [5]

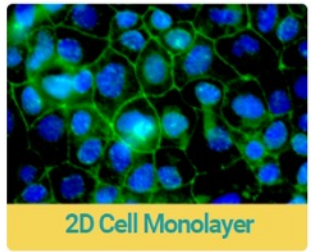
GUT ON CHIP

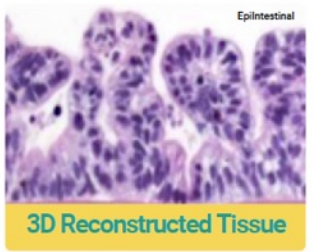


APPLICATIONS

- Gut permeation assay
- Leaky gut assay
- Bioavailability
- Inflammation – IBD
- Probiotic adhesion assay
- Gut-Skin axis/Gut-Brain axis

TISSUE MODELS





Complexity/Reliability

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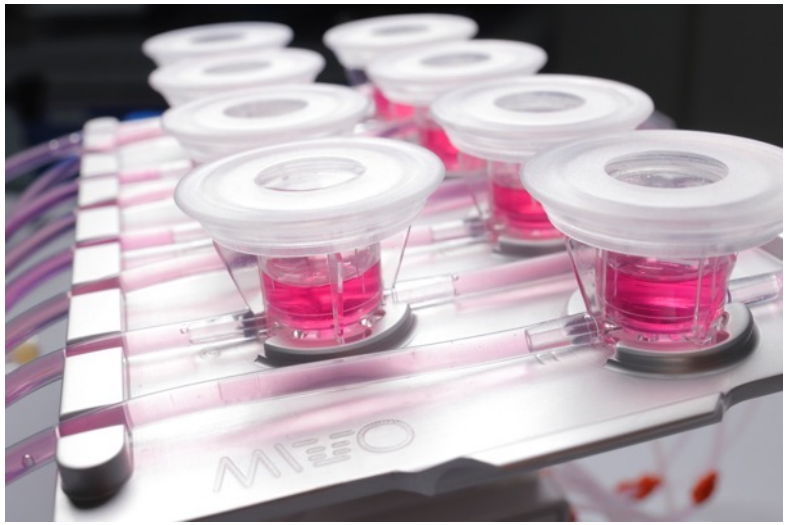
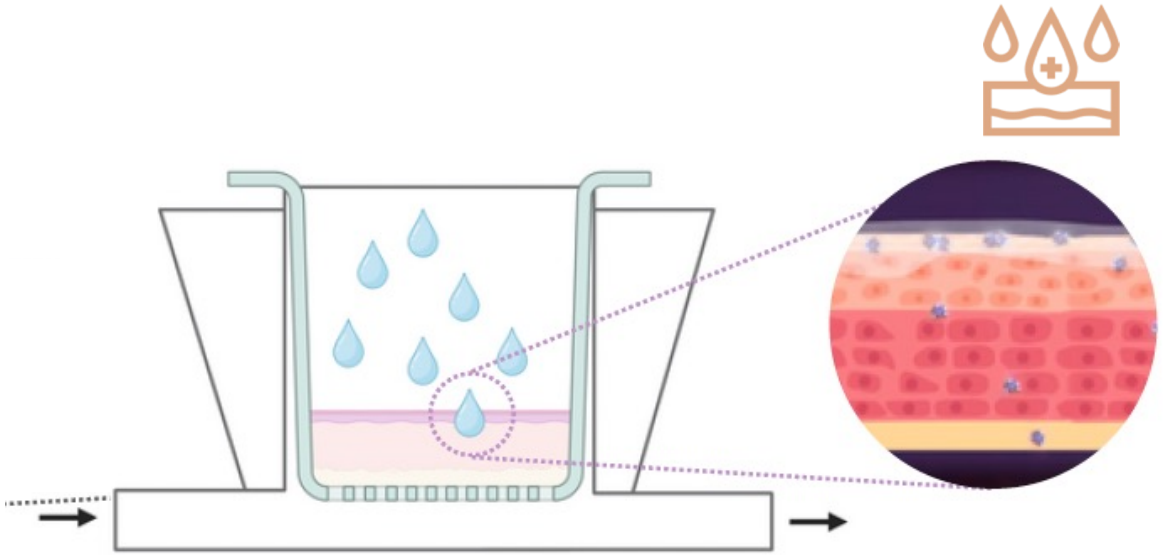
SKIN ON CHIP

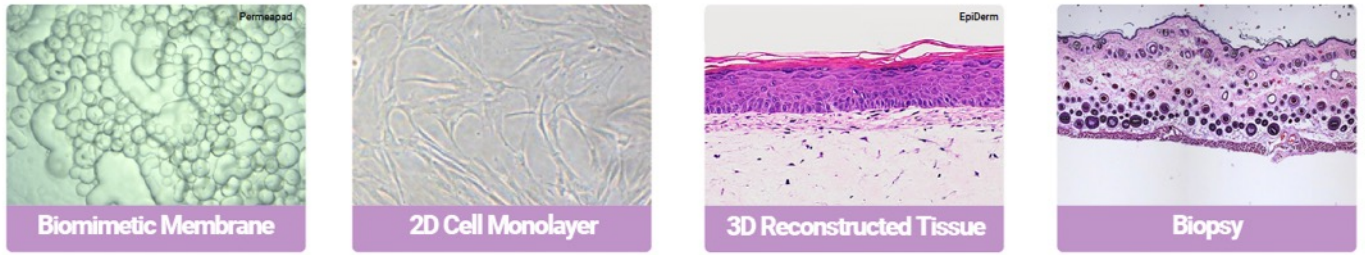




APPLICATIONS

- Skin permeation assay
- Skin aging
- Skin hydratation
- Skin irritation
- Wound healing
- Skin-immune response

TISSUE MODELS



Complexity/Reliability

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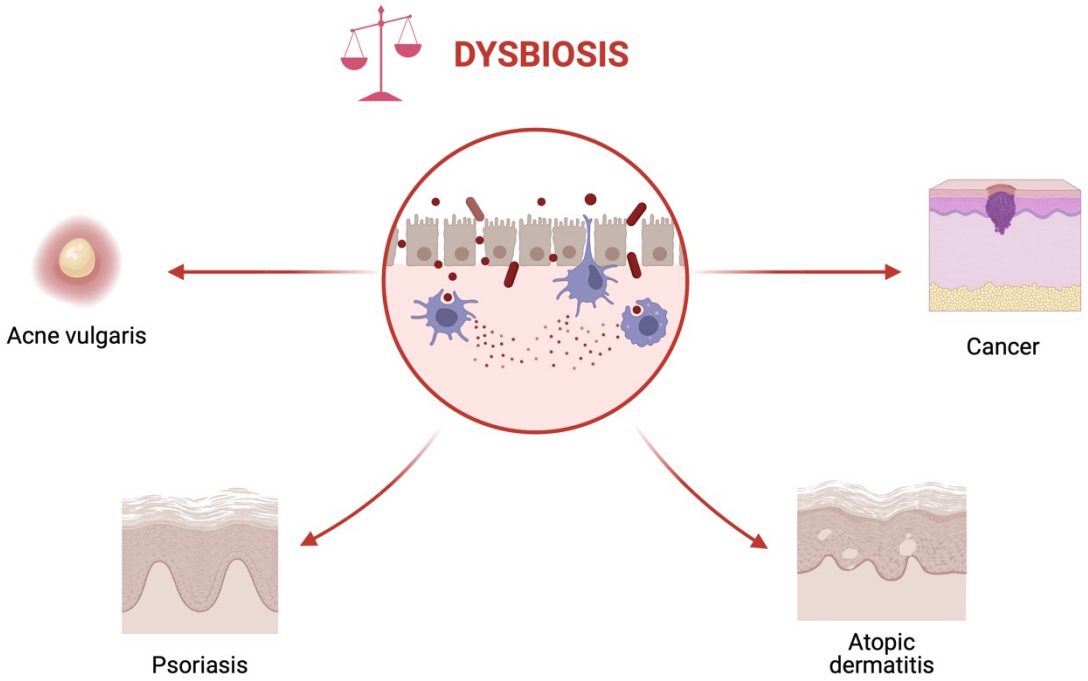
Microbiota influence on skin

Gut-Skin Axis

Dysbiosis in the skin and/or gut **microbiome** is linked to an altered immune response, fostering the onset of various skin conditions, such as atopic dermatitis, psoriasis, acne vulgaris, and even skin cancer



Output

Readout of functional effects

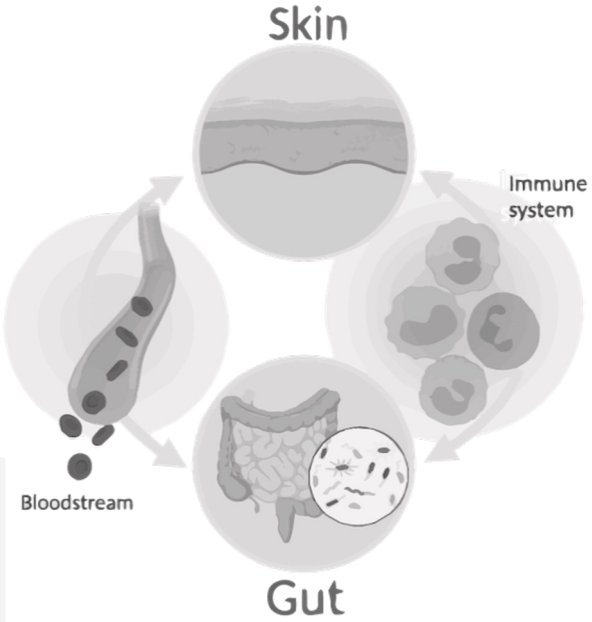
media sampled from both compartments

Monitoring bacteria-skin interplay

Inflammatory markers reduction

Immune response modulation

Modulation of skin-specific markers



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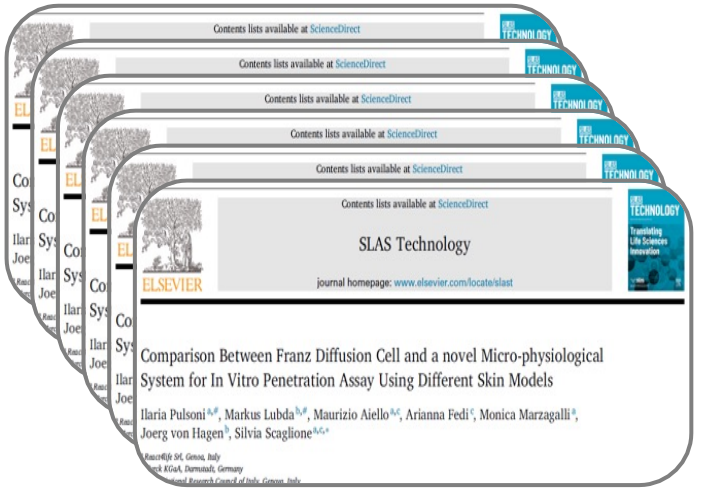
Our traction

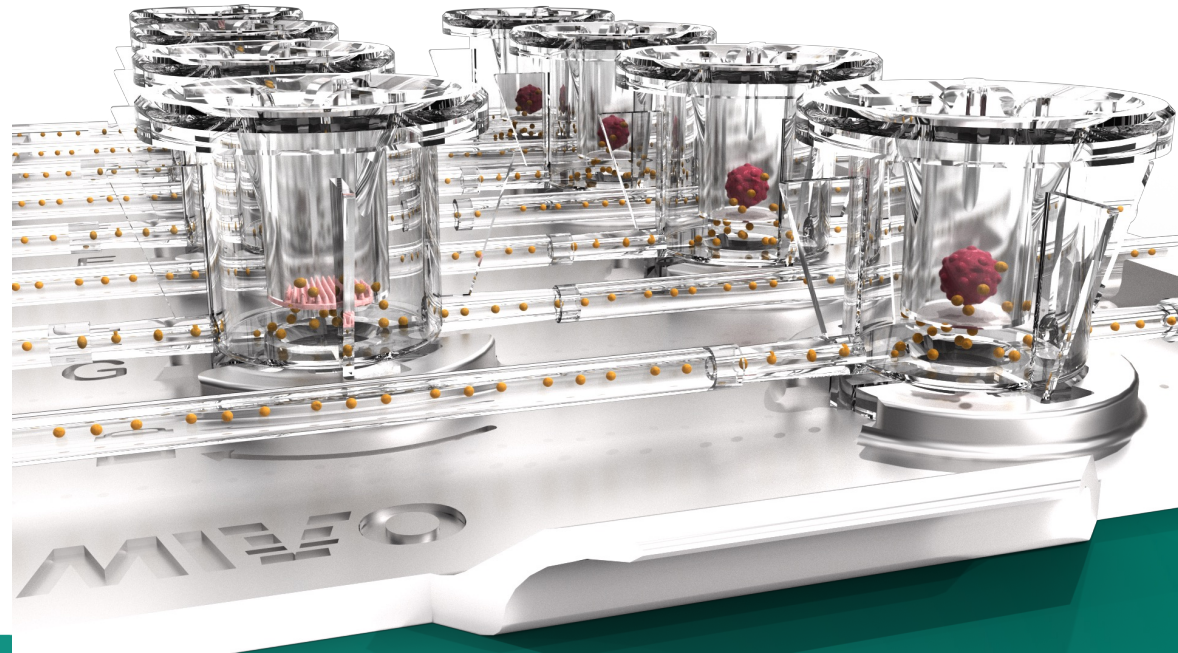
15 Scientific validations published as peer reviewed international papers

4 EU projects won

+100 Scientific citations of MIVO platform by others

+4000 MIVO® sold





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Our Customers

Customers in +22 countries

Our Top Clients

Roche

Erasmus MC
University Medical Center Rotterdam

CHUGAI

abbvie

Inserm

JOHNS HOPKINS UNIVERSITY

UF UNIVERSITY of FLORIDA

Pick the most suitable solution for you!

IN OUR LABORATORY

We can support you with a testing service

IN YOUR LABORATORY

You can adopt internally the technology, we will train you!

WORK TOGETHER

We optimize a protocol assay for you so you can adopt it internally afterwards

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