

NOVA MEDICAL SCHOOL

iNOVA4Health



Developing reconstructed human skin models to understand skin pigmentation mechanisms (and beyond)

Duarte Barral

Membrane Traffic in Disease Lab

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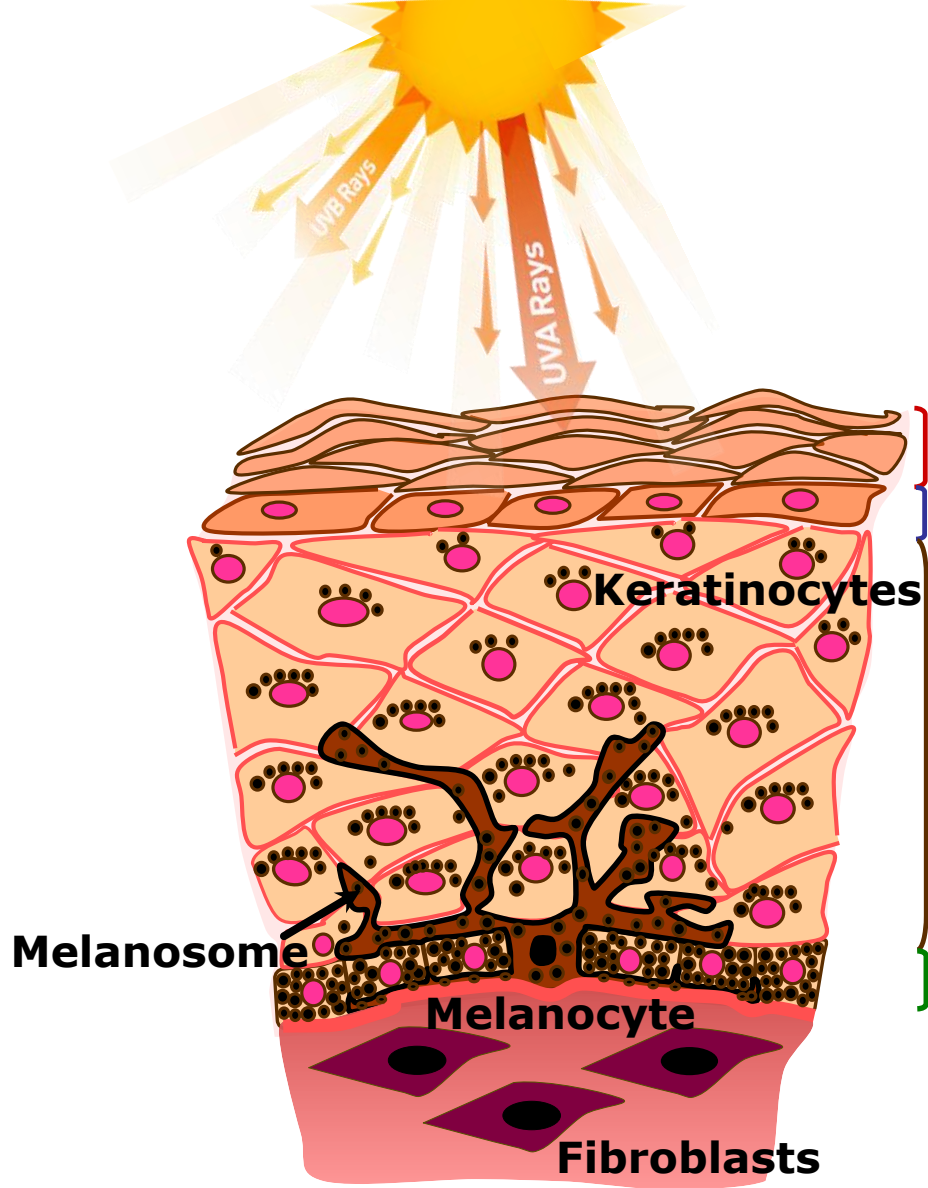
Abel Oliva

Biomolecular Diagnostic Lab

ITQB INSTITUTO DE TECNOLOGIA QUÍMICA E BIOLÓGICA /UNL

May 18th, 2022

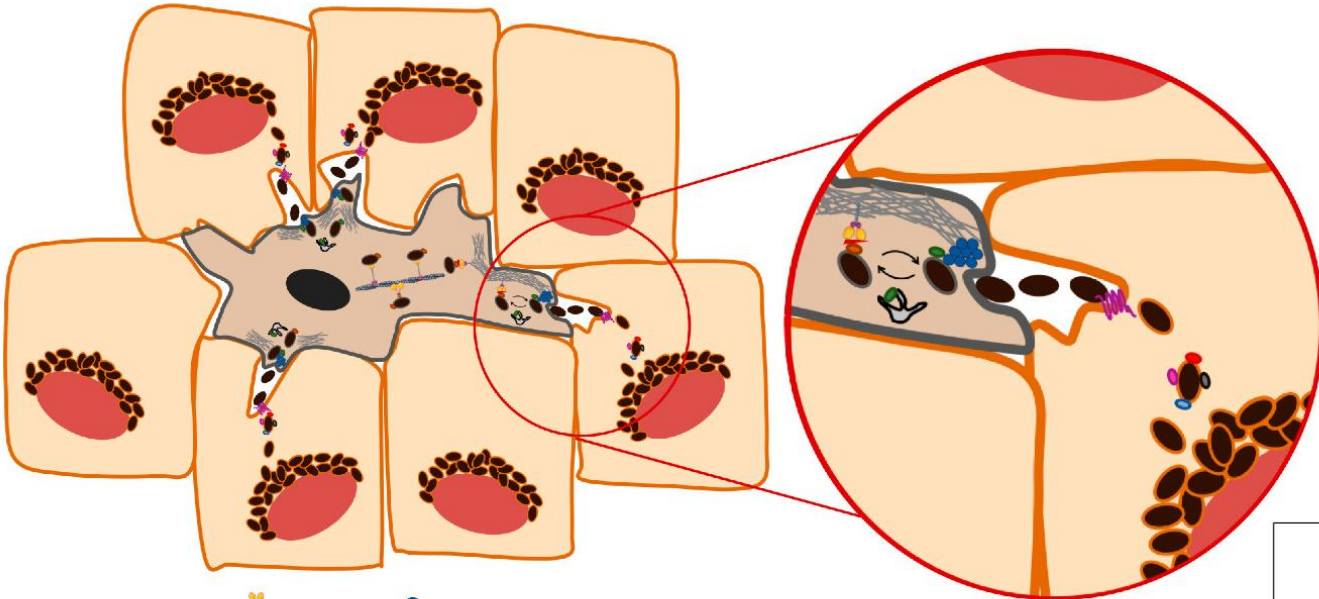
Skin Pigmentation



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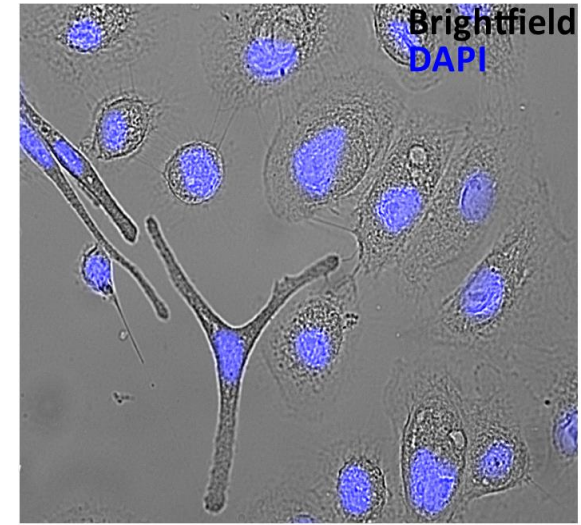
Melanin Transfer Mechanism



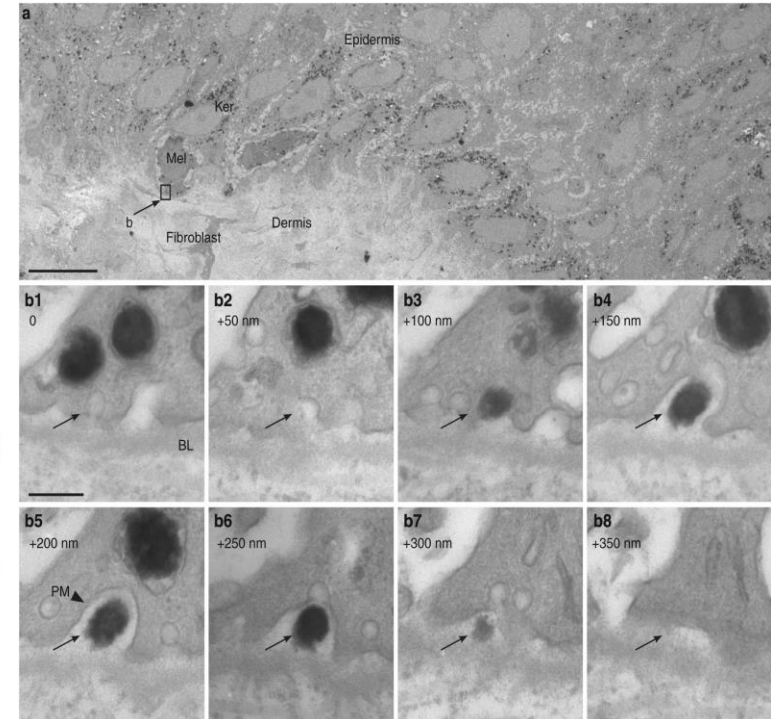
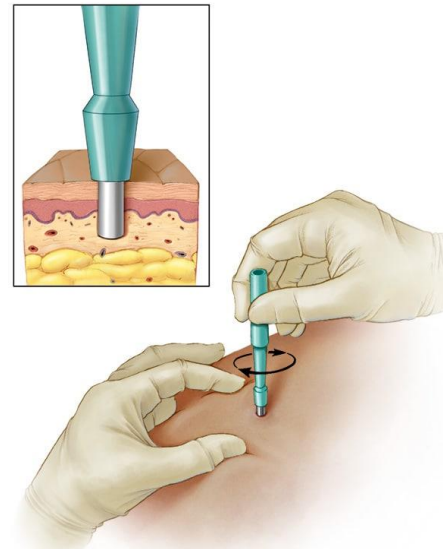
- | | | | | |
|-----------|--------------------|--------|--------|----------------|
| Myosin Va | Exocyst complex | Rab11b | EEA1 | Melanosome |
| Actin | Recycling endosome | Rab27a | LAMP-2 | Melanocore |
| PAR-2 | Melanophilin | Rab5 | CD63 | Melanokerasome |



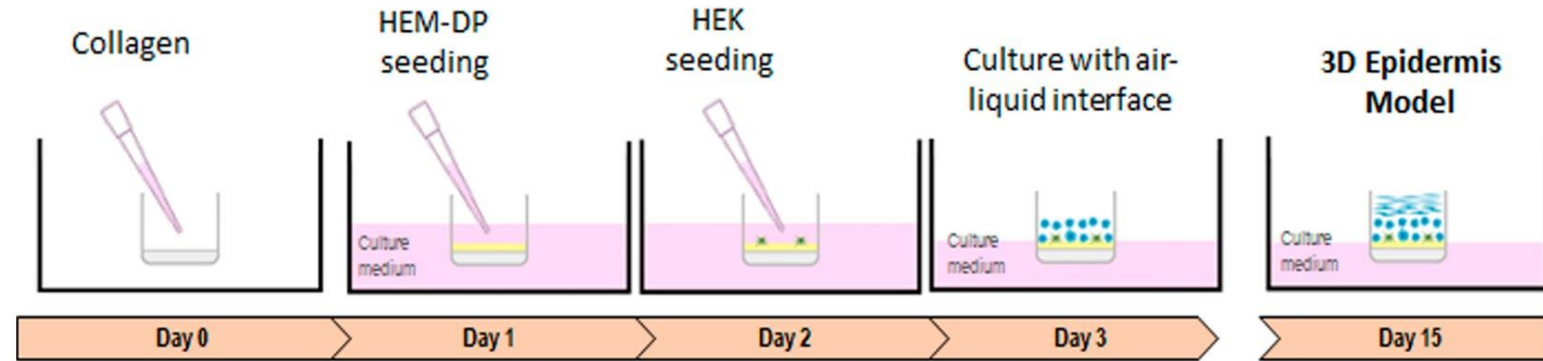
Melanocyte/Keratinocyte co-cultures



Skin biopsies



Reconstructed Human Pigmented Skin/Epidermis



Legend:



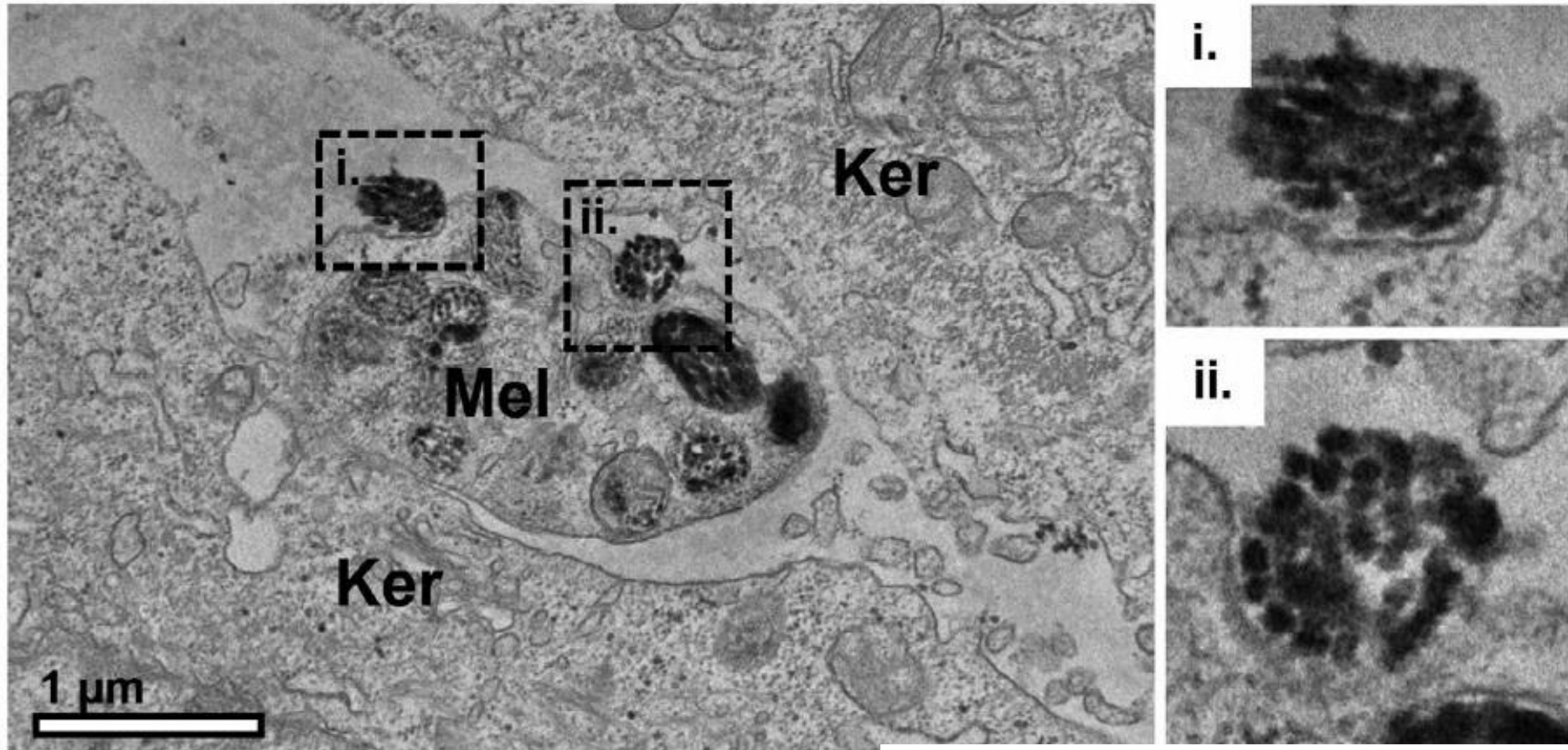
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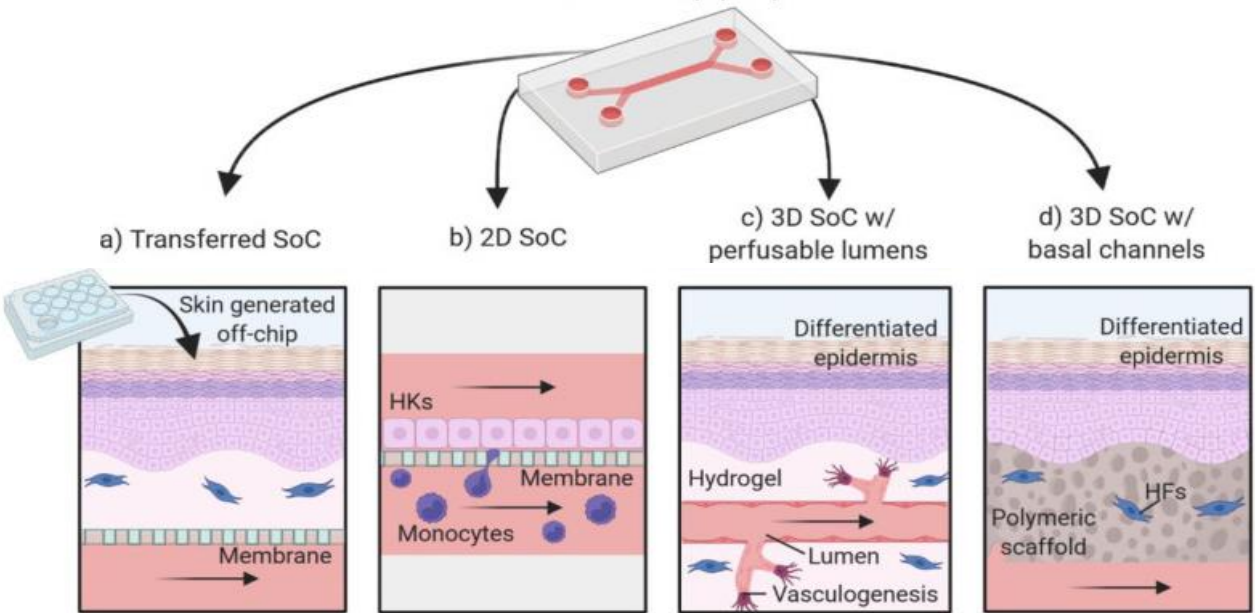
Reconstructed Human Pigmented Skin/Epidermis

Recapitulate Skin/Epidermis Biology

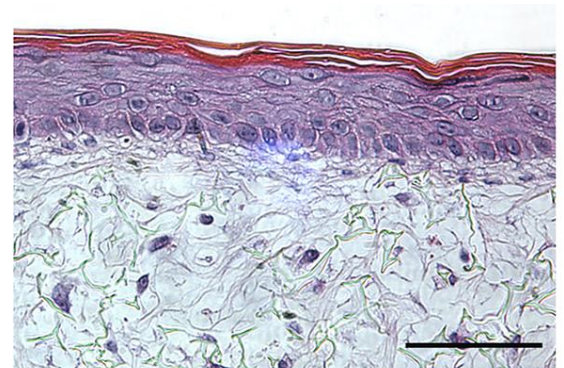
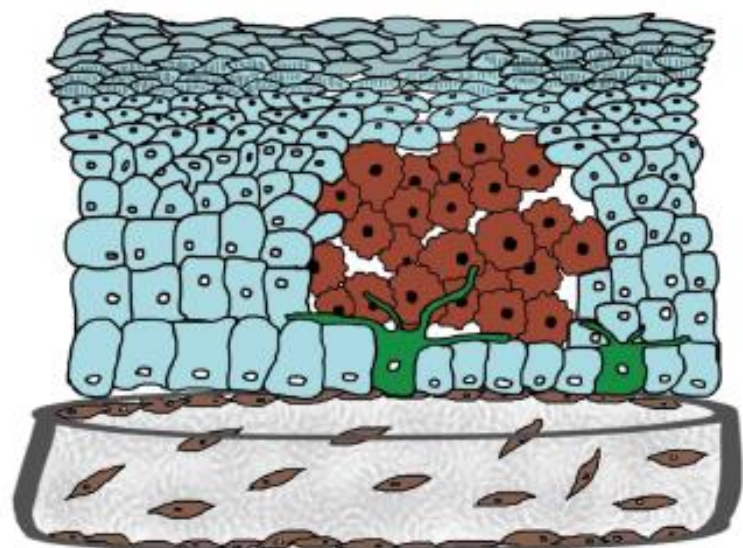


Skin-on-a-chip

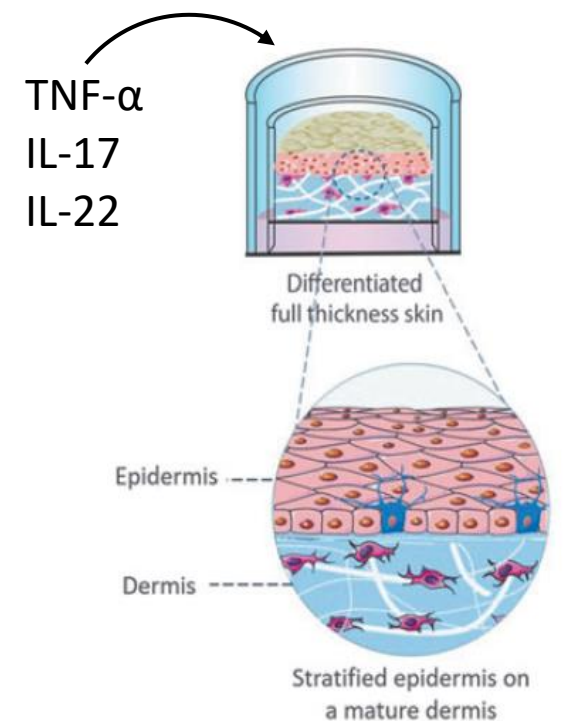
Skin-on-a-chip (SoC)



Melanoma



Psoriasis



Membrane Traffic in Disease Lab

Biomolecular Diagnostic Lab



FCT
Fundação para a Ciência e a Tecnologia
MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E ENSINO SUPERIOR

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