

ALTERNATIVES TO ANIMAL EXPERIMENTATION

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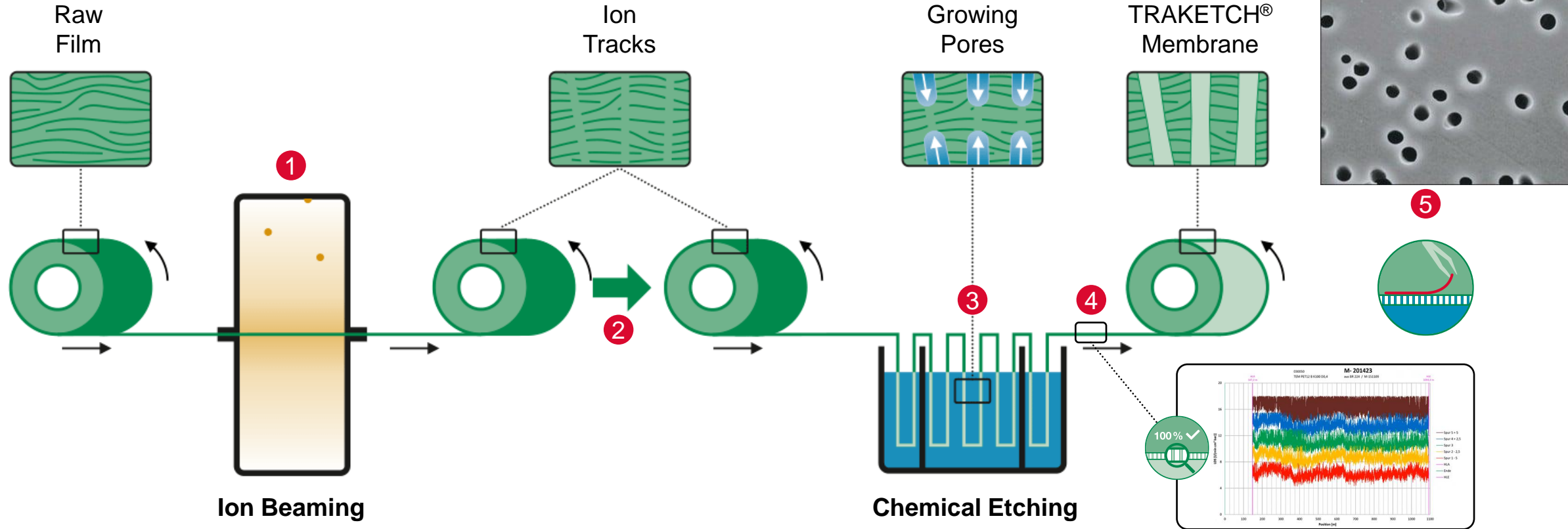
MEMBRANE TECHNOLOGY FOR TISSUE ENGINEERING

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Track-etched membrane manufacturing – Technology

SABEU's worldclass technical expertise



1 Ion Beaming of PET film
Defined density and angles of pores

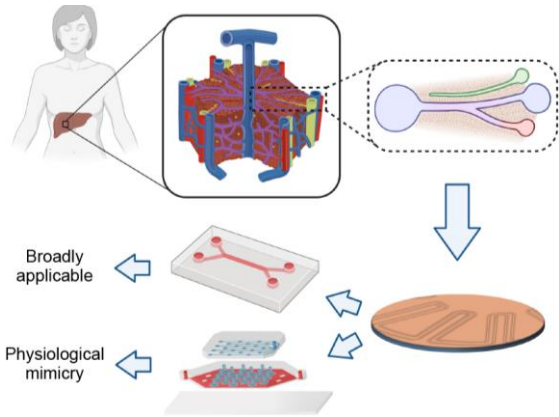
2 Defined Aging
Special aging protocol for best pore characteristics

3 Chemical Etching
of tracks to form precise pores (cleanroom)

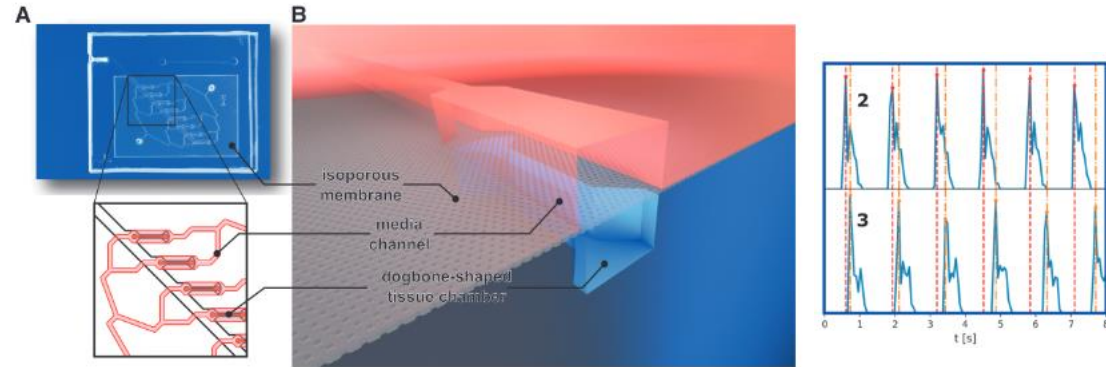
4 Pore size and distribution control
100% in-line quality control of full membrane width

5 Further Treatments
Hydrophilic surface treatment and sterilization

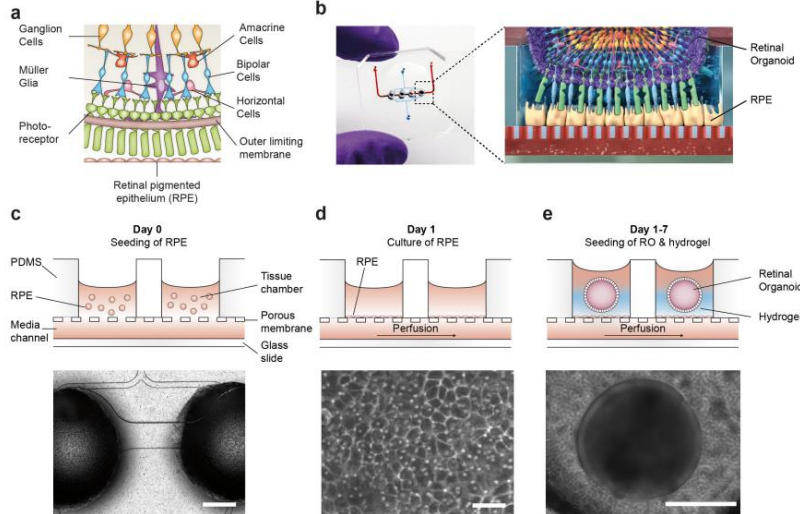
Liver-on-a-chip to evaluate liver toxicity



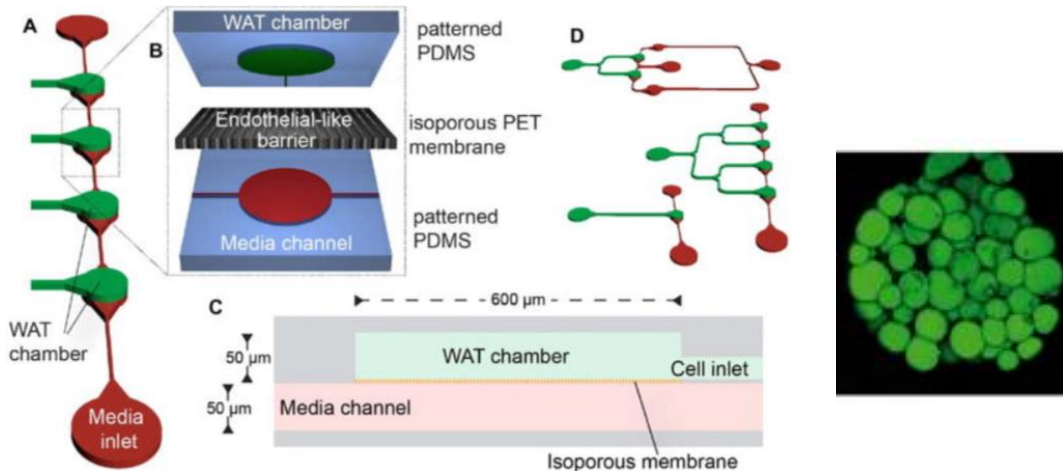
Heart-on-a-chip for medium throughput screening evaluation of heart toxicity



Retina-on-a-chip to evaluate ophthalmological drugs

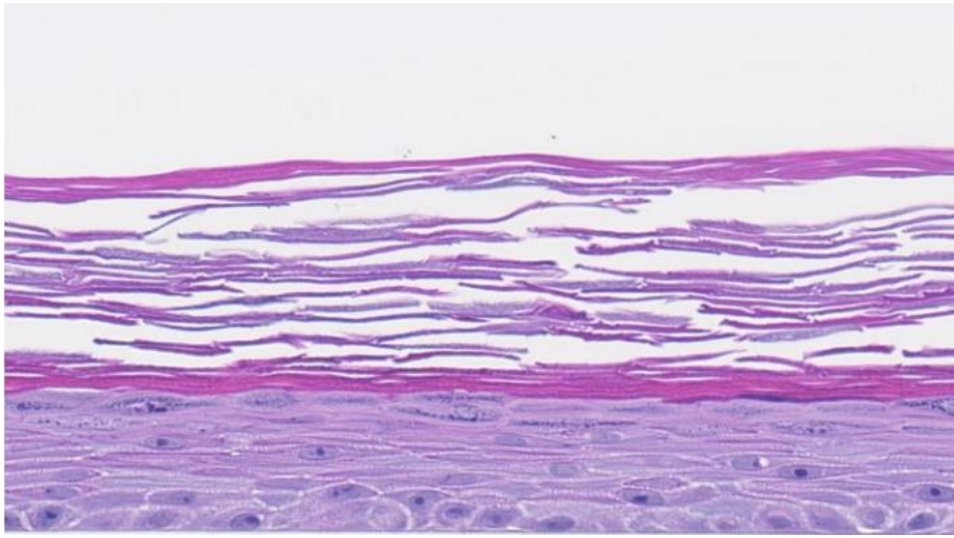
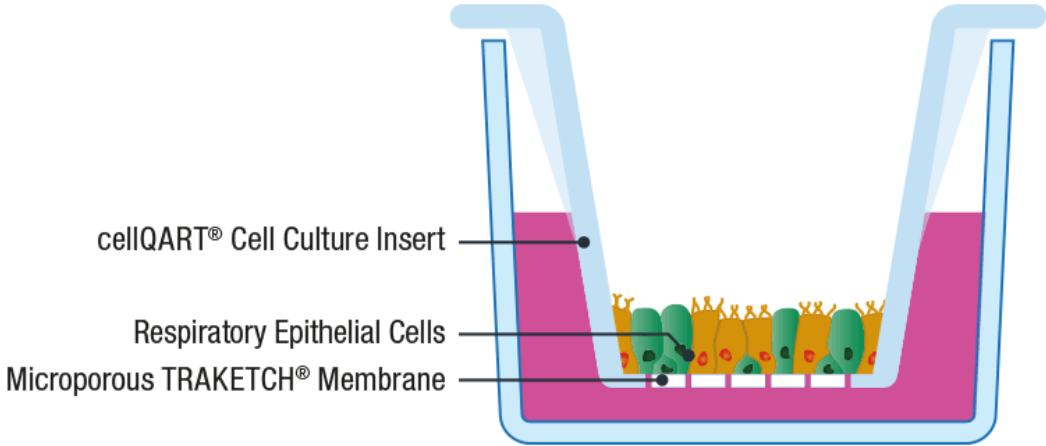


White-adipose-tissue-on-a-chip to evaluate metabolic drugs

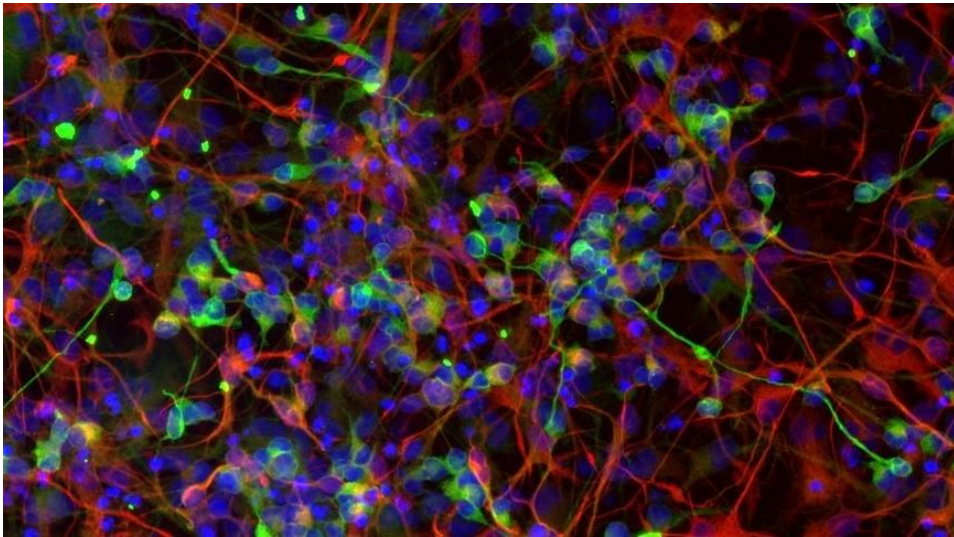
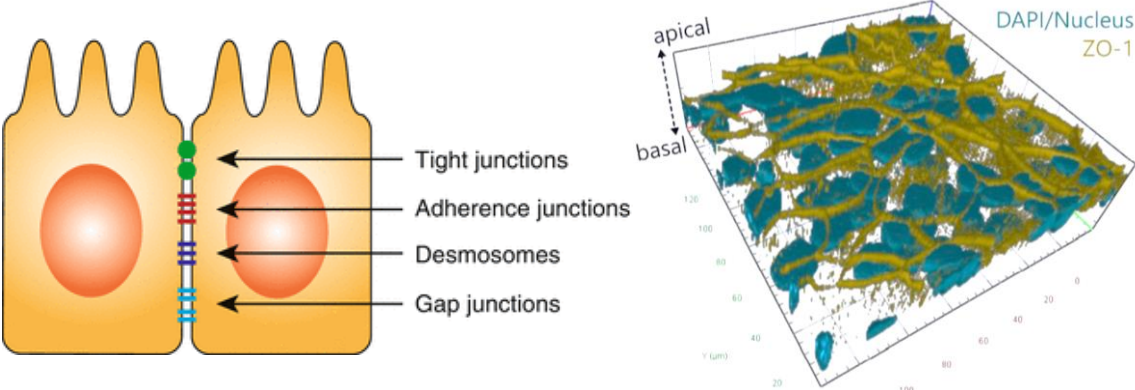


Sources: Liver-on-a-chip devices: the pros and cons of complexity | American Journal of Physiology-Gastrointestinal and Liver Physiology User-Friendly and Parallelized Generation of Human Induced Pluripotent Stem Cell-Derived Microtissues in a Centrifugal Heart-on-a-Chip - PubMed (nih.gov)
Merging organoid and organ-on-a-chip technology to generate complex multi-layer tissue models in a human retina-on-a-chip platform | eLife (elifesciences.org) WAT-on-a-chip: a physiologically relevant microfluidic system incorporating white adipose tissue - PubMed (nih.gov)

Track-etched membranes in tissue engineering



Tissue barrier models



Source: Epithelial Cell Models; General Introduction | SpringerLink