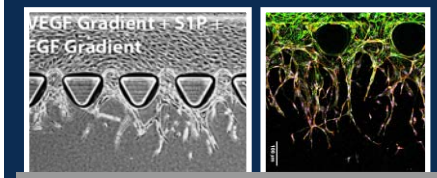
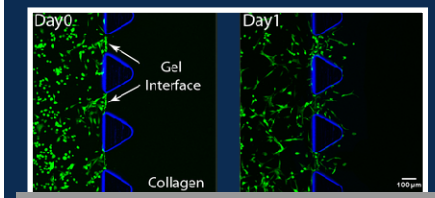
Microfluidic Applications

Angiogenesis



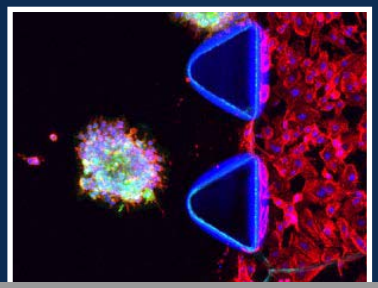
AIM chips allow the growth of new sprouts in a 3D matrix from a pre-existing endothelial monolayer.

Cell invasion and migration



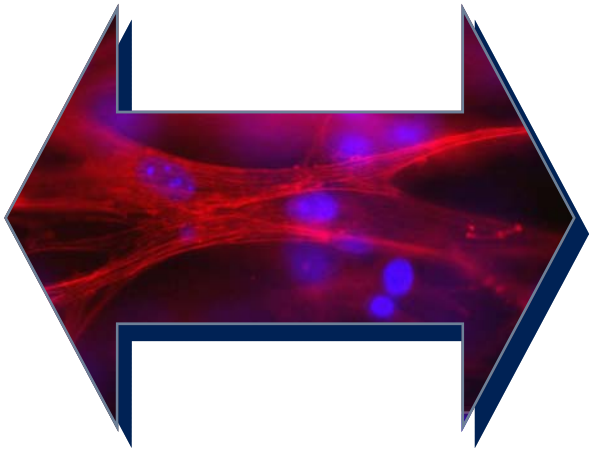
AIM chips provide an unambiguous starting point for cell migration, yielding more reliable & reproducible data.

Cancer cell metastasis



Cancer spheroid dispersion assays are used to model the epithelial-mesenchymal transition (EMT) that occurs in the early stages of cancer metastasis. Cancer spheroids can be seeded in the 3D hydrogel region of AIM chips and co-cultured with other cell types (such as endothelial cells) to mimic the tumor microenvironment.

Culturing cells



in a mechanically active environment

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AIM BIOTECH

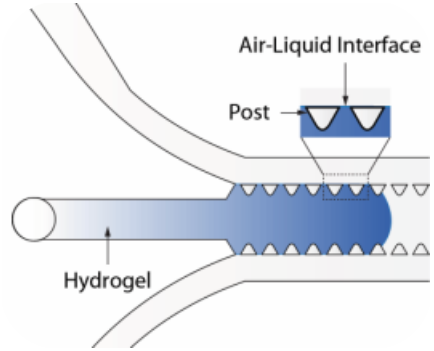
3D CELL CULTURE MICROFLUIDIC CHIPS

Easy-to-use, modular platform for incorporating 3D cell culture into your research

AIM Chips

Compatible with Polymerisable Gels

Gel channels can be filled with collagen, fibrinogen & other hydrogels, or Matrigel™ & other extracellular matrixes (ECM) to suit your experimental needs.

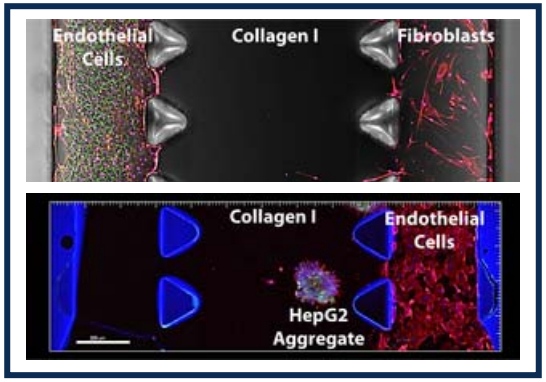


Rapid Media Exchange

AIM chips have ports designed for rapid media exchange through vacuum aspiration with no risk of over-aspiration.

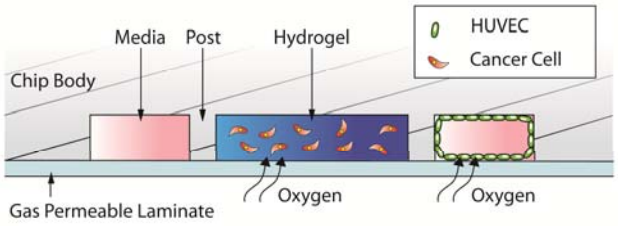
Co-Culture Models

Different cell types can be cultured together in the same channel or compartmentalised into different channels.



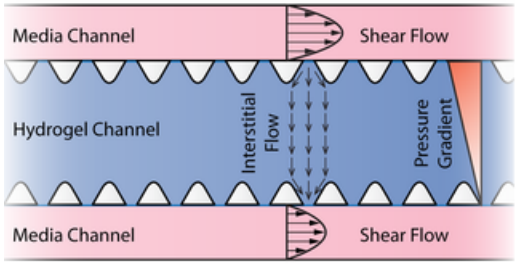
Gas Exchange

The device is laminated with a gas-permeable polymer. Gas exchange takes place effectively, reflecting normoxic or hypoxic incubator environments.



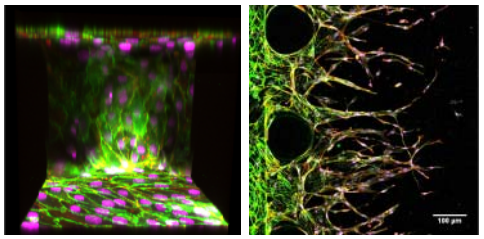
Control of Flow & Chemical Gradients

Interstitial flow & chemical gradients across the 3D hydrogel can be set up and controlled in AIM chips.



Optically Clear

Polymers with a light transmittance rate of 92% are used in AIM chips so they are compatible with phase contrast, epifluorescence, 2-photon & confocal microscopy.



Additional features:

- Microscope slide format (75mm X 25mm)
- Sterile & ready-to-use
- Designed for modular expansion with AIM Luer Connectors
- Fits into a 386-well compliant AIM holder

AIM Chips are manufactured by AIM Biotech PTE. LTD. in Singapore.

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