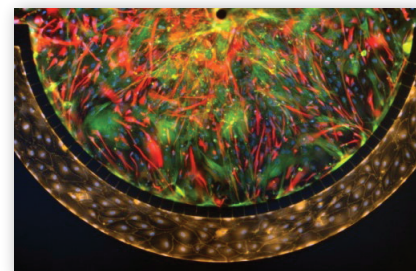
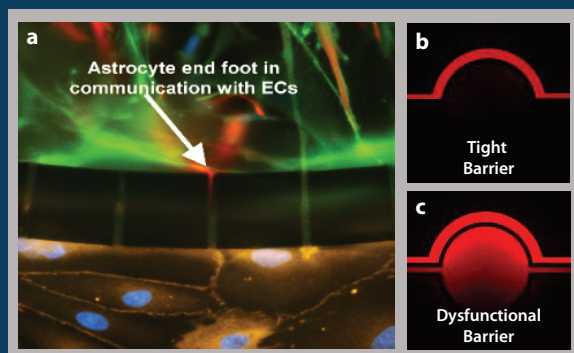


# SynBBB Blood Brain Barrier Model

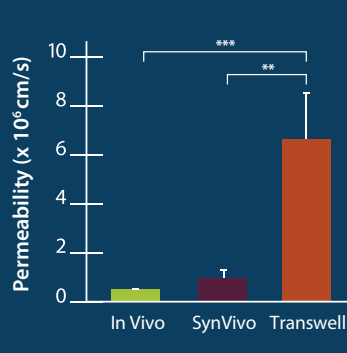
SynBBB Blood Brain Barrier (BBB) on-Chip recreates an in vivo like BBB with brain endothelial cells, astrocytes and pericytes with physiological flow to model blood flow and shear stress. SynBBB can be used to detect permeability of compounds from small molecules to biologics. Measure antibody or viral transport across the BBB using receptor mediated transcytosis assays. Measure drug or inflammation induced BBB injury and test drugs that repair a leaky BBB. Model neuroinflammation and test for anti-inflammatory therapeutics.



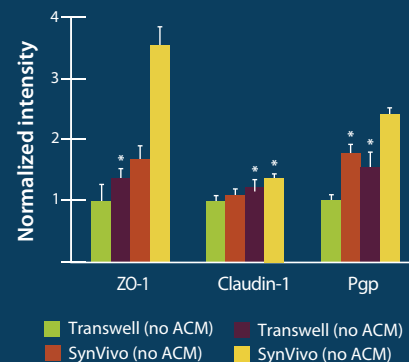
CONTACT US FOR CONTRACT RESEARCH SERVICES USING SynBBB-on-Chip



(a) Human primary cell tri-culture BBB model showing astrocyte end foot in communication with endothelial cells. (b,c) Real-time visualization of small molecule permeation

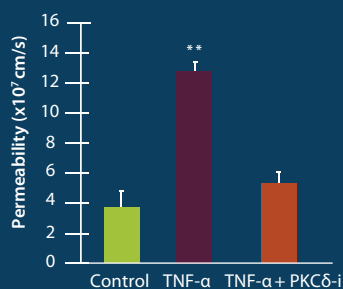


Small molecule permeation data validating the SynBBB model against in vivo and transwell permeability



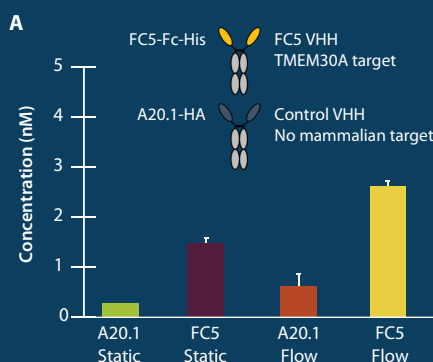
Flow increases the expression of tight junction proteins and transporters when compared to static assays

## Modeling Neuroinflammation

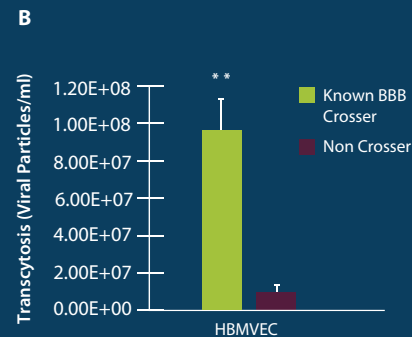


Permeability assay in human brain endothelial cells inflamed with TNF-α vs control. PKC-δ inhibitor prevents TNF-α induced vascular leakage.

## Modeling Antibody and Viral Transcytosis



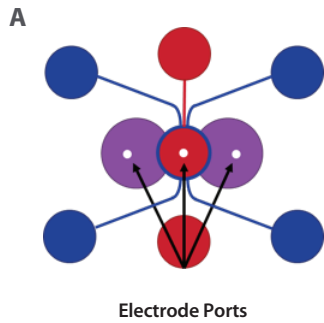
(A) Antibody transcytosis across the SynBBB model. Known crosser FC5-Fc-His vs non-crosser A20.1 tested under static and flow based dosing conditions. (B) AAV Viral Transcytosis with a known crosser vs non crosser in the human SynBBB model.



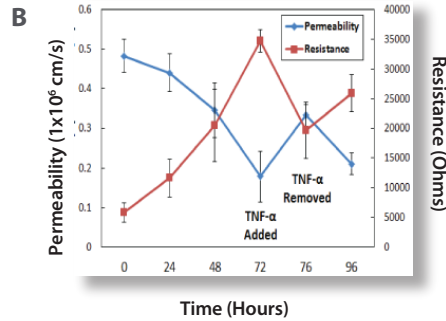
Recreate Normal and Dysfunctional Blood Brain Barrier Models

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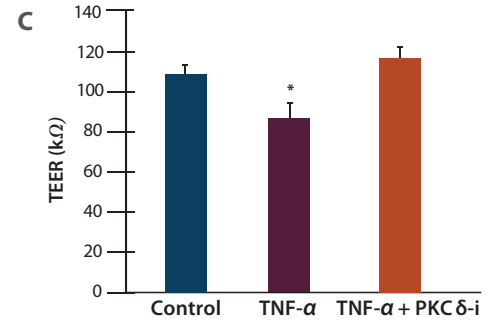
## SynBBB TEER Chips Allow Measurement of Resistance on Chip



(A) Cartoon showing TEER enabled SynBBB chip

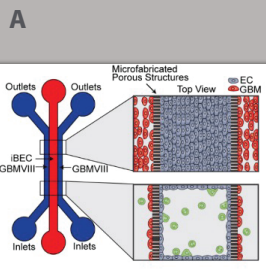


(B) SynBBB TEER chip can be used to measure barrier integrity after treatment with inflammatory cytokines over time.

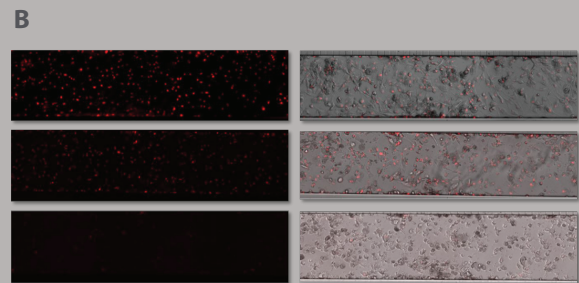
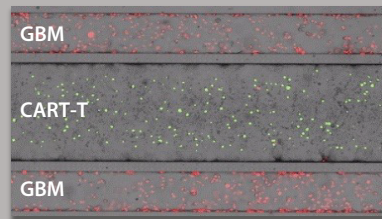


(C) Changes in barrier integrity measured using TEER after TNF-α, or TNF-α plus PKC-δ inhibitor compared to control.

## SynBBB Blood-Brain Tumor Barrier Model



(A) Extravasation of CAR-Ts targeting U87MG human Glioblastoma (GMB) cells.



(B) GBM Cytotoxicity after CAR-T extravasation

## Product Purchase Options

Catalog#	Description	Price
402002 402006 402004	SynBBB Starter Kit - Includes 10 chips, pneumatic priming device, tubing, clamps, syringes, needles. Choose from IMN2 radial, linear or TEER chips.  *TEER Starter Kits include impedance analyzer and electrodes, syringes and needles.	IMN2 Kit - \$1,700 IMN2 TEER Kit - \$3,100
402001 402005 402003	SynBBB Assay Kits - Includes 10 chips, tubing, slide clamps, needles and syringes. Choose from IMN2 radial, linear or TEER chips.  *TEER assay kits include electrodes	IMN2 Kit - \$1,500 IMN2 TEER Kit - \$1,800



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