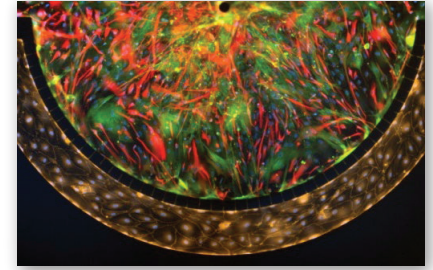
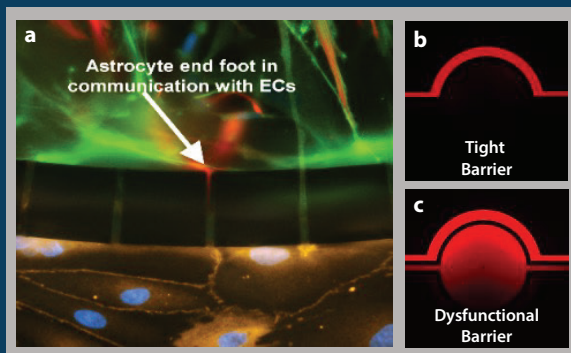


SynBBB Blood Brain Barrier-on-a-Chip

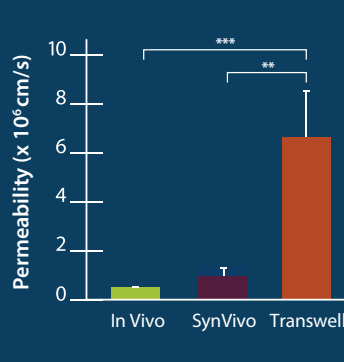
SynBBB™ Blood Brain Barrier (BBB) on-a-Chip recreates an *in vivo* like BBB with brain endothelial cells, astrocytes and pericytes with physiological flow to model blood flow and shear stress. SynBBB can be used to detect permeability of compounds from small molecules to biologics. Measure antibody or 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.



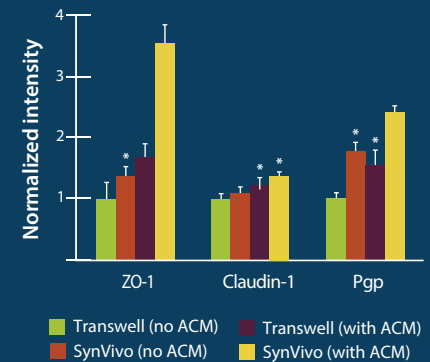
CONTACT US FOR CONTRACT RESEARCH SERVICES USING SynBBB-on-a-Chip



(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

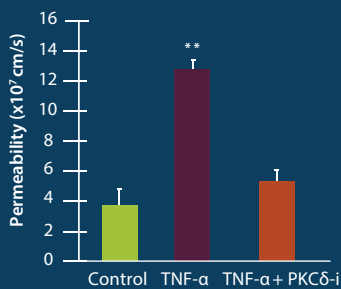


Small molecule permeation data validating the SynBBB model against *in vivo* and transwell permeability



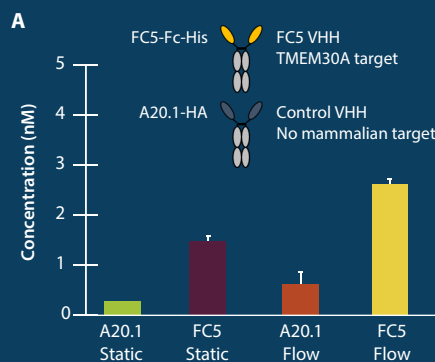
Flow increases the expression of tight junction proteins and transporters when compared to static assays

Modeling Neuroinflammation

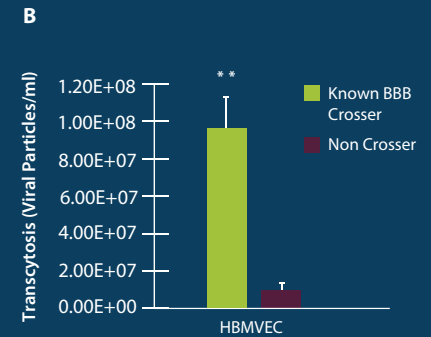


Permeability assay in human brain endothelial cells inflamed with TNF-α vs control. PKC-δ inhibitor prevents TNF-α induced vascular leakage.

Modeling Antibody and Viral Transcytosis



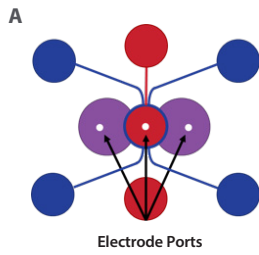
(A) Antibody transcytosis across the SynBBB model. Known crosser FC5-Fc-His vs non-crosser A20.1 tested under static and flow based dosing conditions. (B) AAV Viral Transcytosis with a known crosser vs non crosser in the human SynBBB model.



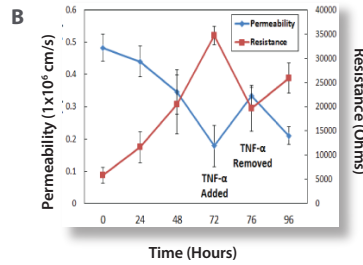
Recreate Normal and Dysfunctional Blood Brain Barrier Models

Find our publication list at: www.synvivobio.com/publications

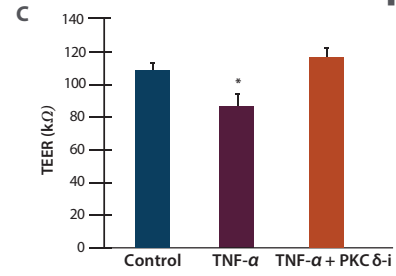
SynBBB TEER Chips Allow Measurement of Resistance on Chip



(A) Cartoon showing TEER enabled SynBBB chip

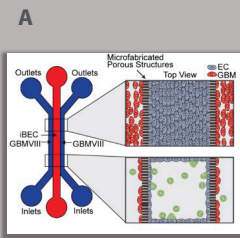


(B) SynBBB TEER chip can be used to measure barrier integrity after treatment with inflammatory cytokines over time.

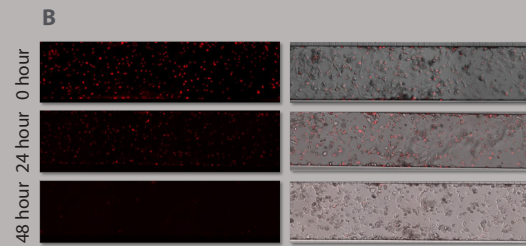


(C) Changes in barrier integrity measured using TEER after TNF-α, or TNF-α plus PKC-δ inhibitor compared to control.

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 12 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 Radial and Linear Kit \$2,415 IMN2 TEER Kit \$4,150

Cells/Cell Lines

Catalog#	Description	Price
Syn-10HU-031 Syn-10HU-035 Syn-10HU-051 Syn-CLU512	Primary Human Brain Vascular Pericytes (HBVP) 0.5 million cells/vial Primary Human Astrocytes (HA) 0.5 million cells/vial Primary Human Brain Microvascular Endothelial Cells (HBMVEC) 0.5 million cells/vial Human Cerebral Microvascular Endothelial Cell Line (hCMEC/D3) 1mL	\$1018 \$1081 \$885 \$1,200

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