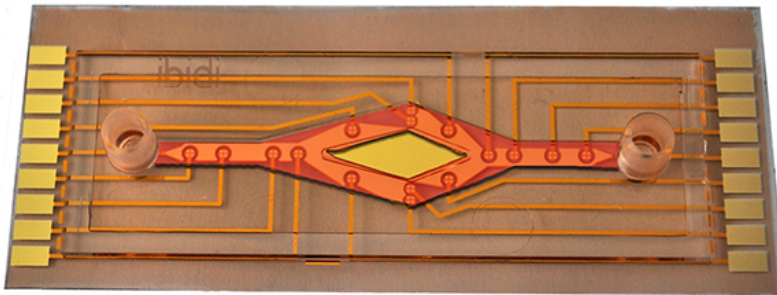


Press release

For Immediate release

TEER measurement under Dynamic Flow Conditions

Troy, NY, June 10, 2014



ECIS™ (Electric Cell-Substrate Impedance Sensing) is the only commercially available technology which continuously monitors TEER under dynamic flow conditions. In their natural environment, endothelial cells are constantly exposed to physical and biochemical stimuli that can alter cell permeability. Laminar shear stress due to blood flow is a principal regulator of systemic endothelial cell gene expression, morphology, and the production of soluble mediators. Its importance is highlighted by pathological processes associated with reduced or absent laminar shear stress, including atherosclerosis. Endothelial transport of macromolecules has been shown to be responsive to flow shear stress, hydrostatic pressure, thermal shock, and agonists such as histamine and thrombin. The ECIS Y flow array is intended for bifurcation studies and blood vessel simulation. It splits into a 30 degree Y channel in one direction and 45 degree channel in the other direction. Eight measurement points, each with 4 circular active electrodes, are located along the channel and through the Y portion of the channel. The electrodes are located close in the corners of the flow direction transition points allowing researchers to study endothelial permeability in vitro under complex shear flow conditions. Applications also include cell-cell interaction studies and cell-drug interaction screenings under flow conditions. This flow array interfaces with the ECIS flow pumps and ECIS measurement system

The ECIS system continuously monitors the TEER of cell monolayers exposed to shear stress conditions. This allows for the dynamic changes in TEER to be recorded due to changes in flow rates, addition of vasoactive compounds under flow conditions, or the introduction of secondary cells.

For further information contact:

Wendy Ladouceur
Applied BioPhysics
185 Jordan Road
Troy, NY 12180
Ph: 1-866-301-ECIS (3247)
Fax 518-880-6860
ladouceur@biophysics.com

For technical questions:

Dr. Christian Renken
Applied BioPhysics
185 Jordan Road
Troy, NY 12180
Ph: 1-866-301-ECIS (3247)
Fax 518-880-6860
renken@biophysics.com
