International Journal of Cell Biology

Special Issue on
Blood Brain Barrier Alterations in Ischemic Brain Damage

Call for Papers

Although clinically heterogenous, ischemic brain damage following focal or global cerebral hypoperfusion or hypoxia shares several common features, one of which is increased permeability of the blood-brain barrier (BBB) in the area of injury.

The BBB controls homeostasis of the central nervous system by establishing a barrier with selective transport mechanisms. The morphological correlates of the barrier are the endothelial tight junctions (TJs), while brain-specific expression of endothelial transporters grants nutrient supply of the nervous tissue and elimination of endo- and xenobiotics, respectively. Disruption of the BBB is likely to enhance secondary brain damage such as neuroinflammation, excitotoxicity, and edema formation. Understanding cellular and molecular BBB alterations in response to cerebrovascular insults like stroke, trauma, or brain tumor will aid the identification and the therapeutical exploitation of molecular targets to prevent BBB disruption.

We are interested in articles on all aspects of cellular structure and function with reference to specific cell types and their role at the BBB in ischemic brain damage. We invite investigators to contribute original research articles as well as review articles that explore cellular aspects of BBB modification in ischemic brain damage, articles describing cell dynamics, cellular communication, cell adhesion and motility, cytoskeleton, siRNA techniques, stem cells (including cancer stem cells), gene therapy strategies, advances in molecular genetics, and molecular diagnostics. Potential topics include, but are not limited to:

- Recent advances in the molecular effects of stroke and brain trauma at the BBB, elucidating control of BBB integrity
- Advances in the understanding of ischemia/hypoxia in brain tumors and their correlation with BBB breakdown and cancer stem cell identity
- The influence of endothelial TJ protein alterations in brain injury
- Advances in our understanding on the role of influx/efflux transporters in ischemic brain disease
- Advances in our understanding of cellular disease mechanisms related to ischemia/hypoxia
- Recent advances in siRNA technologies for treatment of ischemic brain damage
- New in vivo and in vitro models to understand and eventually treat BBB alterations in ischemic brain damage

Before submission authors should carefully read over the journal's Author Guidelines, which are located at http://www.hindawi.com/journals/ijcb/guidelines/. Prospective authors should submit an electronic copy of their complete manuscript through the journal Manuscript Tracking System at http://mts.hindawi.com/ according to the following timetable:

Manuscript Due	Friday, 3 February 2012
First Round of Reviews	Friday, 27 April 2012
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