

Special Issue

Endothelial Dysfunction, Inflammation and Cognition

Message from the Guest Editors

Ten years ago, our laboratory discovered that the adult cardiovascular system contains as much brain-derived neurotrophic factor (BDNF) as the brain and that the endothelium was the main source of it. We also showed that cerebral ED is characterized by a marked decrease in the cerebral levels of BDNF, and a link between ED, BDNF, and cognition has emerged. Endothelial cells participate actively in both innate and adaptive immune responses, and endothelial cells are particularly sensitive to pro- and anti-inflammatory mediators. Many clinical and animal studies have reported associations between low cerebral BDNF levels and high levels of inflammatory markers, as well as the development of behavioral symptoms of cognitive defects.

The main purposes of this Special Issue are as follows:

To explore the interplay between inflammation and endothelial dysfunction and its impact on cognition.

To clarify the contribution of NO and BDNF in this interplay, given that little is known about endothelial BDNF in terms of role and metabolism.

To evaluate the effects of non-pharmaceutical and pharmaceutical therapies on this interplay.

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