

Abstract

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Blood brain barrier: the role of calcium homeostasis.

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BACKGROUND: Calcium as a molecule plays a significant role in the body, especially in the central nervous system. In its free form, it has been classified as a cofactor, second messenger, and signaling molecule, and, when bound, forms a protein and coenzyme. This is secondary to the critical, and at times, very sensitive reactions associated with it. Calcium homeostasis, especially in the context of the central nervous system, may have crucial implications in many neuropsychiatric conditions.

SUMMARY: The hypothesis presented will explore the link between the blood-brain barrier (BBB) and calcium homeostasis (CH) as it is a complex, physiological process. Absence of organic deficits associated with conditions, such as pervasive developmental disorder (PDD), autism spectrum disorders (ASD), mental retardation (MR), and attention deficit hyperactivity disorder (ADHD), in addition to other chronic psychiatric disorders, builds a more compelling case to explore CH in context of the BBB.

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