## **Special Issue**

# Hypoxic-Ischemic Brain Injury in Newborn: The Present Status and Challenges in the Future

#### Message from the Guest Editor

Hypoxic-ischemic brain injury remains a leading cause of neonatal mortality and long-term neurodevelopmental disabilities, primarily affecting the term-born population, although preterm infants may also be at risk. Despite remarkable advances in perinatal care, the diagnosis and therapy of neonatal brain injury remain a challenge, and therapies are largely supportive. The only established clinical intervention for hypoxic-ischemic brain injury is therapeutic hypothermia demonstrating reductions in risk of death or impairment. However, half of treated infants still suffer from major neurological problems such as cerebral palsy or epilepsy. Furthermore, in preterm infants, therapeutic hypothermia cannot be applied due to its side effects and insufficiency. This Special Issue critically examines challenges in optimizing treatment and timing, improving access to care in low-resource settings, and addressing long-term outcomes. Additionally, the Issue highlights future directions, including precision medicine approaches, artificial intelligence in early diagnosis, and innovative rehabilitation methods.

#### **Guest Editor**

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#### Editor-in-Chief

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