



## Recent Advances in Immune-Mediated Cerebellar Ataxias: Pathogenesis, Diagnostic Approaches, Therapies, and Future Challenges

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### Message from the Guest Editors

The clinical category of immune-mediated cerebellar ataxias (IMCAs) has been established after 3 decades of clinical and experimental research. IMCAs include diverse etiologies, including paraneoplastic cerebellar degeneration (PCD), post-infectious cerebellitis, gluten ataxia, and anti-GAD ataxia.

Recent remarkable progress has clarified various characteristics of these etiologies and therapeutic strategies in terms of immunotherapies. Some patients whose clinical profiles do not match those of classic types are now gathered in a spectrum of primary autoimmune cerebellar ataxia (PACA).

It is still unclear how immune tolerance is broken, leading to autoimmune insults of the cerebellum, and how cerebellar circuits are damaged by antibody- or cell-mediated mechanisms. Antibodies may specifically target the cerebellar circuitry and impair synaptic mechanisms (synaptopathies).

The present Special Issue aims to illuminate what is solved and what is unsolved in clinical practice and pathomechanisms of IMCAs.





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