

Table 1

Summary of the studies related to the potential involvement of *C. difficile* in brain pathologies.

Brain pathology	Main findings	Selected references
Autism Spectrum Disorders (ASD)	Dysbiosis in the gut microbiota composition with an overrepresentation of <i>Clostridioides</i> species in autistic children in comparison to healthy control	Finegold et al., 2002 ; Song et al., 2004 ; Critchfield et al., 2011 ; Navarro et al., 2016
	Improvement of diarrhea, communication and behavioral symptoms upon vancomycin administration in children with severe ASD	Molloy and Manning-Courtney, 2003
Parkinson's disease	People within 2 years from the first diagnosis with <i>C. difficile</i> infection were at increased risk to develop the disease	Kang et al., 2020
Alzheimer's disease	Fecal microbiota transplantation improved gastrointestinal, cognitive and mood symptoms together with eradication of <i>C. difficile</i> in two patients	Hazan, 2020 ; Park et al., 2021
Multiple sclerosis	Fecal microbiota transplantation resolved <i>C. difficile</i> infection and improved constipation and neurological symptoms in four patients	Borody et al., 2011 ; Makkawi et al., 2018