The blood-brain-barrier (BBB) plays a critical role by being highly selective and controls the passage of substances in and out of the CNS. Small molecules and lipid soluble proteins cross the BBB easily, larger ones need receptor-mediated transcytosis. BBB dysfunction is associated with many neurodegenerative diseases.

An emerging question is whether the mutations associated with neurodegenerative diseases can independently lead to blood–brain barrier (BBB) dysfunction.