Supplementary treatment-related information

CDP-choline (Citicoline) can be administered orally or through intravenous routes where both administration routes show similar bioavailability (> 90%) and initial peak plasma time at ~2-3 hours after drug administration. Exogenous CDP-choline is a water-soluble compound that is well tolerated with a daily dose ranging from 500 and up to 4000 mg/day. CDP-choline's metabolites cross the blood-brain barrier and can be detected in brain tissue in less than thirty minutes after administration. Although CDP-choline has been extensively associated with increases in phospholipid biosynthesis, and thus neuronal membrane repair, the presence of its metabolites (such as cytidine, choline, and methionine) are indicative of its role in modulating cholinergic receptors and neurotransmitters (Galletti et al., 1991; Gareri et al., 2015; Sarkar et al., 2012; Secades, 2011).

Galantamine, administered orally, has a maximum plasma concentration-time range between 0.5 to 2 hours in healthy participants. Cytochrome P450 isoenzymes rapidly metabolize galantamine in the liver, and its bioavailability ranges between 85 to 100%. The metabolites exert a dual action, primarily as a reversible and competitive acetylcholine esterase inhibitor and also as an allosteric modulator of nicotinic receptor's α subunits (Jann et al., 2002; Scott and Goa, 2000).