molecules MDPI

**Table S1.** Effects and side effects of medications for the treatment of NDs.

| NDs | Types | Drug | Effects | Adverse effect | Reference |
|---|---|---|---|---|---|
| AD | Cholinesterase inhibitors | Galantamine, memantine, rivastigmine, donepezil and tacrine | Inhibiting the activity of AChE, thereby increasing the cholinergic levels in the brain | Convulsions, vomiting, nausea, diarrhea, stomach cramps, liver damage, weight loss, chest pain, muscle cramps and weakness, irregular breathing and heartbeat | [1] |
| | Anti-oxidant drugs | Melatonin, monoamine oxidase inhibitors | Anti-oxidation, anti-inflammatory effects, inhibitory effects on the Aβ generation | Hypertensive crisis, hypertension | [2,3] |
| | Calcium channel blockers | Flunarizine, nimodipine, nilvadipine, nitrendipine | Decreasing calcium influx through the plasma membrane and impairment of synapse physiology, protecting AD cells from Aβ oligomer production | Affecting normal neurotransmission | [4] |
| | Drugs directed at β1 amyloid | MK-8931, E2069 | Decreasing the concentrations of cerebral Aβ | Seizures, hypomyelination, axon guidance defects, neurogenesis abnormalities, memory deficits | [5] |
| PD | Catechol-O-methyltransferase inhibitors | Entacapone, tolcapone, opicapone | Inhibiting catechol-O-methyl transferase enzyme, leading to a higher levodopa concentration in the blood | Liver toxicity, drowsiness, nausea, insomnia, hallucination, dizziness | [6] |
| | Drugs for stimulating dopaminergic signaling | Levodopa, DOPA decarboxylase inhibitors | Being converted to dopamine and stored in the vesicles of presynaptic dopaminergic neurons | Abnormal involuntary movements and results in levodopa-induced dyskinesia | [7] |
| | Inhibitors of the monoamine oxidase B | Rasagiline, selegiline | Degrading the neurotransmitter dopamine that is deficient in the nigro-striatal region in PD, and forms $H_2O_2$ and toxic aldehyde metabolites of dopamine | Vomiting, nausea, hypotension | [8] |

| | | | | | |
|---|---|---|---|---|---|
| | Dopamine agonists | Apomorphine, ergot alkaloids, ropinirole | Induce an antiparkinsonian effect through actions on either D1-like or D2-like dopamine receptors | Producing dyskinesia identical to that of levodopa | [9,10] |
| HD | Inhibitors of the vesicular monoamine transporter type 2 | Deutetrabenazine, tetrabenazine | Inhibiting vesicular monoamine transporter type 2, decreasing available dopamine in the synapse and interacting with postsynaptic dopamine receptors | Parkinsonism, depression, akathisia, anxiety, fatigue | [11] |
| ALS | Anti-excitotoxic drug | Riluzole | Blocks the presynaptic release of glutamate | Nausea, asthenia, vomiting, diarrhoea, anorexia, dizziness, increased alanine transferase, low hemoglobin | [12] |
| | Anti-oxidant drug | Edaravone | A free radical scavenger to reduce oxidative stress | Abnormal liver function, increased alanine transferase | [13] |

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