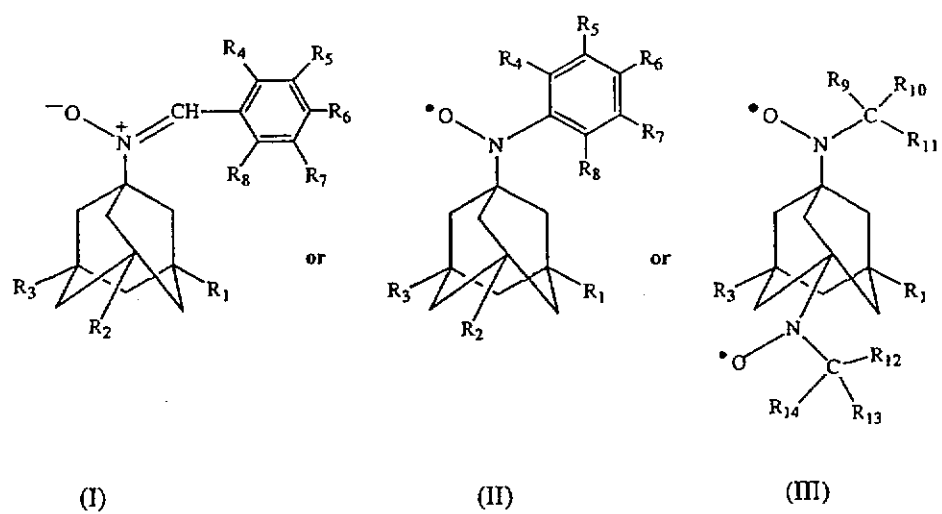


FIG. 1



Clinical Studies with Memantine

Abbreviations: C-O = cross-over; O = open-label; IV = intravenous; P-C = placebo-controlled; PBO = placebo; PO = oral; R = randomized; wks = weeks

Study	Study Design/N	Dose/ Duration study	Efficacy	Adverse Events
Parkinson's disease				
Fischer et al. 1977	O/12	IV, 40 mg in 2 hours single dose	+ motor drive and rigor	Dizziness, fatigue, lack of coordination sense of well-being at 6 hours post-infusion
Rabey et al. 1992	O/12	PO, 10-30 mg/day X 4 wks	+ Parkinson's syndrome in 5/10	Nausea, abdominal pain, confusion and dizziness, psychomotor agitation
Riederer et al. 1991	O/4	PO, 10-30 mg/day X 6 wks	1 memantine pt had mild improvement in motor symptoms	Psychosis in 2 patients (concomitant Meds included L-dopa, amantadine)
Schneider et al. 1984	R, DB, P-C/67	PO, 30 mg/day X 6 wks	Significant improvement in fine motor ability in memantine group	90% tolerated well
Merello et al. 1999	R, DB, CO, P-C/12	PO, 30 mg/day X 2 wks	Improvement in Parkinsonian Symptoms	Mild transient drowsiness and nausea
Dementia				
Fleischhacker et al. 1986	R, SB, P-C/20	IV, 20-30 mg/day X 5 wks	5 Memantine and 4 PBO pts improved enough for discharge	Delusions of guilt, delirium, mild hypotonia
Ditzler 1991	R, DB, P-C/66	PO, 10-30 mg/day X 6 wks	Memantine > PBO	Agitation, increased motor activity, insomnia, restlessness
Götelmeyer and Erbler 1992	R, DB, P-C/88	PO, 10-20 mg/day X 6 wks	Memantine > PBO	Akathisia, increased motor activity, insomnia, headache
Pantev et al. 1993	R, DB, P-C/60	PO, 10-30 mg/day X 4 wks	Memantine > PBO	Restlessness, akathisia, vertigo
Rieke and Glaser 1996	O/1420	PO, 13-26 mg/day	Memantine end > baseline	Restlessness, nausea, fatigue
Neurogenic bladder				
Grossman and Schütz 1982	O/18	PO, 20-70 mg/day X 2 wks	Improvement in bladder function	Agitation, giddiness, impaired concentration and sleep
Spasticity				
Munding and Milos 1985	O/37	PO, 30-60 mg/day X 8 wks	Improvement in neurological symptoms	78% tolerated well; some patients giddiness, nausea, stupor
Rohde 1982	O/30	IV, 10-30 mg/day/4-14 months	Improvement in spasticity 17/30	Fatigue, increased transaminases, GGT
Bayerl and Grün 1985	Single blind/ Cross-over/30	PO, 20-30 mg/day X 6 wks	61% improved	Mood elevation, increase in drive
Leskow 1987	O/226	PO, 10-30 mg/day X 6 wks	Improvement in fine motor movement, muscle tone	Dizziness, tiredness, headaches
Cranio cerebral trauma				
Miltner 1982	O/45	IV, 60-80 mg/day X 10 days	Improvement in level of consciousness	Well-tolerated
Chronic CNS Disease				
Ambrozi and Danielczyk 1988	DB, P-C/30	7 Dose X 6 weeks	Memantine > PBO	Euphoria, vertigo
Neuropathic pain				
Nikolajsen et al. 2000	R, DB, C-O, P-C	PO, 5-20 mg/day X 6 wks	Memantine + PBO	Nausea, headache, skin rash

FIG. 2

FIG.3

