

Table SI. Study characteristics and efficacy results								
Pharmacological intervention	Study	Participants n: at treatment endpoint (at allocation) tps: mean time post stroke ±SD (range) a: mean age years ±SD (range) s: sex male/female sev: level of stroke severity	Intervention/s Exp: experimental Con: control D: dose Tx: adjuvant therapy EP: endpoint (t-treatment; f-follow-up)	Efficacy outcome measures (Primary OM - specified)	p-value stated by authors		Effect size (Cohen's d (95% CI)) calculated for this review	
					Between groups Endpoint score comparison	Between groups Change score comparison	Between groups Endpoint score comparison	Between groups Change score comparison
<i>CNS stimulants</i> ¹								
amphetamine	Crisostomo et al (1988) ²	n: 8 (8) tps: 6.5 ± 2.7 days (3-10 days) a: 61 ± 9.7 yrs (47-73 yrs) s: 7M/1F sev: not specified	Exp: amphetamine 10mg [#] + Tx Con: placebo [#] (unspecified ingredients) + Tx D: 11am on day 2 Tx: physical therapy x 45mins, within 3hrs of administration of intervention EP: day 3 (t)	Fugl-Meyer Assessment (UL+LL)	-	<0.05	-	+ 1.69 (-0.09, 3.03)
	Sonde et al (2001) ³	n: 39 (40) tps: 8 days (-) a: 78 ± 5.9 yrs (66 – 91 yrs) s: 23M/16F sev: not specified	Exp: amphetamine 5mg tablet + Tx Con: placebo tablet (unspecified ingredients) + Tx D: 2 tabs x 2 days/wk x 5 wk (10 doses), 60mins prior to Tx Tx: PT x ≥30 mins x 5 days/wk + site regular training program EP: 3mo (f)	Fugl-Meyer Assessment Barthel Index	N.S. N.S.	N.S. N.S.	- -	- -
dexamphetamine	Gladstone et al (2006) ⁴	n: 67 (71) tps: 8.4 ± 1.7 days (-) a: 68 ± 15 yrs (-) s: 36M/31F sev: mod-sev	Exp: dexamphetamine sulphate 10mg capsule + Tx Con: placebo capsule (unspecified ingredients) + Tx D: 2 days/wk x 5wk (10 doses) Tx: PT x 1hr, 90mins post intervention dose EP: 3mo (f)	Fugl-Meyer Assessment Functional Independence Measure Chedoke-McMaster Disability Inventory Clinical Outcome Variable Scale Chedoke-McMaster Arm and Hand Activity Inventory	N.S. N.S. N.S. N.S. N.S.	N.S. N.S. N.S. N.S. N.S.	- - - - -	- - - - -
	Platz et al (2005) ⁵	n: 26 (31) tps: 5.6 ± 5.0 wks (3 - 18wks) a: 57 ± 12 yrs s: 12M/14F sev: not specified	Exp: dexamphetamine 10 mg capsule + Tx Con: placebo capsule (unspecified ingredients) + Tx D: 2 hrs prior to Arm Ability training x 2 days/wk x 3wk Tx: Arm Ability training, x 45mins x 5 days/wk x 3wk EP: 12mo (f)	TEMPA unilateral TEMPA all Tapping time Aiming test 10-metre Walk Test	- - - - -	N.S. N.S. N.S. N.S. N.S.	- - - - -	- - - - -
	Schuster et al (2011) ⁶	n: 15 (16) tps: 20 ± 7 days (-) a: 67 ± 6.8 yrs (-) s: 8M/8F sev: not specified	Exp: dexamphetamine 10 mg tablet + Tx Con: placebo tablet (unspecified ingredients) + Tx D: 2 days/wk x 5wk, 1-3hrs prior to PT session. Tx: Bobath x 1hr daily; individualised rehabilitation. EP: 12mo (f)	Chedoke-McMaster Stroke Assessment (CMSA) - ADL CMSA – impairment CMSA – arm CMSA – hand CMSA – leg CMSA – foot CMSA – postural control	N.S. N.S. N.S. N.S. N.S. N.S. N.S.	- - N.S. N.S. N.S. N.S. N.S.	- - - - - - -	- - - - - - -
	Sprigg et al (2007) ⁷	n: 33 (33) tps: 15 ± 7.4 days (4 – 30 days) a: 71 ± 12 yrs (33 – 81 yrs) s: 15M/18F	Exp: dexamphetamine 10mg [#] + Tx Con: placebo [#] (unspecified ingredients) + Tx D: 2 days/wk x 35 days (11 doses), 1-2 hrs prior to Tx	Fugl-Meyer Assessment (UL) Motricity Index (UL) Scandinavian Stroke Scale Barthel Index	N.S. N.S. N.S. N.S.	- - - -	- - - -	- - - -

		sev: not specified	Tx: inpatient PT EP: 3mo (f)	modified Rankin Scale extended Activity of Daily Living	N.S. N.S.	- -	- -	- -
	Treig et al (2006) ⁸	n: 22 (24) tps: 3.5 ± 0.8 wks (-) a: 57 ± 8.7 yrs (-) s: 19M/5F sev: not specified	Exp: dexamphetamine 10mg tablets + Tx Con: placebo tablets (unspecified ingredients) + Tx D: every 4 days x 10 doses (total 100mg/36 days) Tx: individual PT x 45mins x 5 days/wk x 36 days EP: 12mo (f)	Barthel Index Rivermead Assessment Scale (RMA) – gross function RMA – leg and trunk RMA – arm	N.S. N.S. N.S. N.S.	- - - -	- - - -	- - - -
	Walker-Batson et al (1995)⁹	n: 10 (10) tps: 23 ± 6 days (16 – 30 days) a: 65 ± 9.0 yrs (48 – 73 yrs) s: 4M/6F sev: mod - severe	Exp: dexamphetamine 10mg capsule + Tx Con: placebo capsule (unspecified ingredients) + Tx D: every 4 th day x 10 doses Tx: PT EP: 12mo (f)	Fugl-Meyer Assessment	-	<0.05	-	-
methylphenidate	Grade et al (1998)¹⁰	n: 20 (21) tps: 18 ± 3.6 days (-) a: 71 ± 3.8 yrs (-) s: 11M/10F sev: not specified	Exp: methylphenidate 10mg capsule + Tx Con: placebo capsules (unspecified ingredients) + Tx D: 30mg daily x 3 wks Tx: physical therapy EP: 3 wks (t)	modified Functional Independence Measure Fugl-Meyer Assessment	0.03 N.S.	- -	+ 3.31 (1.97, 4.59)	- -
	Lokk et al (2011) ^{11,i}	n: 39 (50) tps: 60 ± 31 days (-) a: 65 ± 10 yrs (-) s: 23M/16F sev: moderate	Exp: methylphenidate 10mg tablet + Tx Con: placebo tablet (unspecified ingredients) + Tx D: 2 tabs 1 hour prior to Tx x 5 days/wk x 15 sessions Tx: standardized rehabilitation x 45 mins x 5 days/wk x 15 sessions EP: 6 mo (f)	Fugl-Meyer Assessment Barthel Index National Institute of Health Stroke Scale	N.S. N.S. N.S.	N.S. N.S. N.S.	- - -	- - -
	Tardy et al (2006)¹²	n: 8 (8) tps: 19 ± 9 days (9-35days) a: 61 ± 10 yrs (46-70 yrs) s: 8M/0F sev: not specified	Exp: methylphenidate 20mg[#] + Tx Con: placebo [#] (unspecified ingredients) + Tx D: daily x 1 day; crossover with 7-day washout Tx: calibrated passive training of wrist & finger extension x 10mins, x 2, between dose administration and testing EP: 1-4hr post dose administration (t)	Handgrip force Finger tapping test Target pursuit task	- - -	N.S. <0.01 N.S.	- - -	- - -
<i>CNS stimulants^{1, 13}/Inert metabolic dopamine precursors¹ (+ peripheral dopa decarboxylase inhibitor)¹</i>								
methylphenidate/levodopa (+ carbidopa)	Lokk et al (2011)^{11,i}	n: 39 (50) tps: 64 ± 33 days (-) a: 63 ± 9.6 yrs (-) s: 25M/14F sev: moderate	Exp: methylphenidate (MP) 10mg tablet + levodopa (LD) 125mg tablet + Tx Con: placebo (PBO) tablet (unspecified ingredients) + Tx D: 2 x MP/PBO tabs + 1 x LD/PBO, 1 hour prior to Tx x 5 days/wk x 15 sessions Tx: standardized rehabilitation x 45 mins x 5 days/wk x 15 sessions EP: 6 mo (f)	Fugl-Meyer Assessment Barthel Index National Institute of Health Stroke Scale	N.S. N.S. N.S.	N.S. 0.01 <0.01		
<i>Dopamine agonists¹</i>								
ropinirole	Cramer et	n: 33 (33)	Exp: ropinirole pill + Tx	<u>Timed 50-Foot Walk Test</u>	N.S.	-	-	-

al (2009) ¹⁴	tps: 7.1 ± 3.5mo (-) a: 62 ± 14yrs (-) s: 23M/10F sev: moderate	Con: placebo pill (unspecified ingredients) + Tx D: 0.25-4mg once/daily (titrated wkly to at least 3mg/day) x 9wks Tx: PT x 90mins, 1 hr after administration of pill x twice wkly, during wks 6-9 EP: 3mo (f)	6-Minute Walk Test Fugl-Meyer Assessment Stroke Impact Scale-16 Barthel Index	N.S. N.S. N.S. N.S.	- - - -	- - - -	- - - -
<i>Erythropoietin agonists¹</i>							
Erythropoietin (EPO)	Ehrenreich, H. (2002)¹⁵ n: 40 (40) (efficacy study) tps: 2hr40min – 7hr55min a: 39 – 80 yrs [‡] s: 28M/12F sev: moderate	Exp: recombinant human EPO 3.3 x 104 IU/50 ml/30 min Con: placebo infusion (saline) D: 0, 24, 48hr (cumulative dose = 100,000 IU rhEPO) Tx: nil reported EP: 1mo (f)	National Institute of Health <u>Stroke Scale</u> Scandinavian Stroke Scale Barthel Index <u>modified Rankin Scale</u> Δ National Institute of Health Stroke Scale Δ Scandinavian Stroke Scale S100β (serum marker of brain injury)	- - <0.05 N.S. - - <0.05	- - - - N.S. - <0.03	- - - - - - -	- - - - - - -
<i>Gonadotrophins^{1,13}/erythropoietin agonists¹³</i>							
human choriongonadotropin (hCG) alfa/erythropoietin (EPO)	Cramer et al (2014) ¹⁶ n: 89 (96) tps: 38 ± 6.5 hrs (-) a: 58 ± 12 yrs (-) s: 31M/65F sev: moderate - severe	Exp: subcut. hCG 385µg inj. followed by IV EPO (4000IU or 12000IU or 20000IU) Con: subcut. saline followed by IV saline D: hCG/placebo on days 1, 3, 5; EPO/placebo on days 7, 8, 9. Tx: nil reported EP: 3mo (f)	ΔNational Institute of Health <u>Stroke Scale</u> National Institute of Health Stroke Scale % modified Rankin Scale ≤2 Barthel Index	N.S. N.S. N.S. N.S.	- - - -	- - - -	- - - -
<i>Granulocyte colony-stimulating factors¹</i>							
Filgrastim (G-CSF)	Ringelstein et al (2013) ¹⁷ n: 273 (328) tps: 6.8 ± 0.1hrs (-) a: 69 ± 1.0 yrs (-) s: 144M/129F sev: moderate	Exp: filgrastim (G-CSF) 135 µg/kg infusion (diluted with 5% dextrose) Con: placebo infusion (saline) D: one-third of the total cumulative dose was administered as an intravenous bolus (30-minute infusion), whereas the remainder of the dose was administered as continuous intravenous infusion at a steady rate over 72 hours Tx: nil reported EP: 3 mo (f)	<u>modified Rankin Scale</u> National Institute of Health Stroke Scale	N.S. N.S.	- -	- -	- -
	Schaebitz et al (2010) ¹⁸ n: 38 (44) tps: 10 ± 4.2 hrs a: 70 ± 12 yrs s: 16M/28F sev: moderate	Exp: filgrastim (G-CSF) infusion Con: placebo infusion D: total cumulative doses of 30–180 µg/kg over the course of 3 days Tx: nil reported EP: 3mo (f)	modified Rankin Scale National Institute of Health Stroke Scale Barthel Index infarct evolution	N.S. N.S. N.S. -	- - - N.S.	- - - -	- - - -
<i>Humanized monoclonal antibodies¹⁹</i>							
GSK249320	Cramer et al (2017) ¹⁹ n: 64 (133) tps: 53 ± 14 hrs (-) a: 68 ± 12 yrs (-)	Exp: GSK249320 15mg/kg infusion + Tx Con: placebo infusion (unspecified ingredients) + Tx	Δ 10-metre Walk Test Δ 10-metre Walk Test (day 180) modified Rankin Scale	- - N.S.	N.S. N.S. -	- - -	- - -

		s: 73M/60F sev: not specified	D: day 1 and 6±2days. Tx: individualised rehabilitation EP: 3mo (f)	National Institute of Health Stroke Scale Box and Block test	N.S. - -	- - -	- - -	
<i>Hydrogenated ergot alkaloids</i> ¹³								
hydergine	Bochner et al (1973) ²⁰	n: 21 (39) (study 1) tps: 9.7 ± 3.4 mo (-) a: 64 ± 0.66 yrs (-) s: 15M/6F sev: not specified	Exp: hydergine 1mg tablet Con: placebo tablet (unspecified ingredients) D: 3 times/day x 12wk Tx: nil reported EP: 3mo (t)	Limb strength Handgrip strength Number of handgrip in 30sec 12-foot Walk Test Timed sit-to-stand Feeding ability assessment	- - - - - -	N.S. N.S. N.S. N.S. N.S. N.S.	- - - - - -	- - - - - -
<i>Inert metabolic dopamine precursors +/- peripheral dopa decarboxylase inhibitor</i> ¹								
levodopa +/- carbidopa	Acler et al (2009a) ²¹	n: 10 (12) tps: 28 ± 11 mo (10-48 mo) a: 70 ± 8.0 yrs (60-84 yrs) s: 6M/4F sev: not specified	Exp: levodopa 100mg/carbidopa25mg # Con: placebo# (unspecified ingredients) D: daily x 5wk, crossover with 2mo washout Tx: nil reported EP: 5wk (t)	Rivermead Assessment Scale Nine-Hole Peg Test (affected hand) 10-metre Walk Test Transcranial magnetic stimulation	- - - -	N.S. 0.01 0.04 N.S.	- - - -	- - - -
	Floel et al (2005) ²²	n: 9 (9) tps: 3.7 ± 0.7 yrs (1-8 yrs) a: 66 ± 9.5 yrs (55-85 yrs) s: 6M/3F sev: not specified	Exp: levodopa/carbidopa 100mg/25mg capsule + Tx Con: placebo capsule (unspecified ingredients) + Tx D: 1 hour prior to testing; crossover with ≥ 24hr washout Tx: motor training to encode motor memory x 30mins EP: 60mins (t)	%TMS-evoked thumb movement in Training Target Zone Motor Threshold (agonist) Motor Threshold (antagonist) Motor Evoked Potential (agonist) Motor Evoked Potential (antagonist)	- - - - -	0.01 N.S. N.S. N.S. N.S.	- - - - -	- - - - -
	Lokk et al (2011) ^{11,i}	n: 40 (50) tps: 61 ± 27 days (-) a: 66 ± 9.4 yrs (-) s: 28M/12F sev: moderate	Exp: levodopa 125mg tablet + Tx Con: placebo tablet (unspecified ingredients) + Tx D: 1 hour prior to Tx x 5 days/wk x 15 sessions Tx: standardized rehabilitation x 45 mins x 5 days/wk x 15 sessions EP: 6 mo (f)	Fugl-Meyer Assessment Barthel Index National Institute of Health Stroke Scale	N.S. N.S. N.S.	N.S. N.S. N.S.	- - -	- - -
	Restemeyer et al (2007) ²³	n: 10 (10) tps: 4.8 ± 5.5 yrs (0.75 – 2 yrs) a: 62 ± 12 yrs (35 – 80 yrs) s: 4M/6F sev: not specified	Exp: levodopa 100 mg /carbidopa 25 mg dissolved in water Con: placebo dissolved in water (unspecified ingredients) D: 45mins prior to Tx; crossover with 14-day washout Tx: PT x 1hr EP: 1hr 45mins post administration of intervention (t)	Nine-Hole Peg Test Action Research Arm Test Transcranial magnetic stimulation	N.S. N.S. N.S.	N.S. N.S. N.S.	- - -	- - -
	Rosser et al (2008) ²⁴	n: 18 (18) tps: 3.3 ± 2.1 yrs (1.5 – 8.3 yrs) a: 66 ± 6.8 yrs (53 – 78 yrs) s: 13M/5F sev: not specified	Exp: levodopa 100 mg /carbidopa 25 mg capsule + Tx Con: placebo capsule (unspecified ingredients) + Tx D: twice a day on day 1, once on day 2; crossover with 14-day washout. Tx: procedural motor learning tasks, 90mins after intervention dose on day 2 EP: day 2 (t)	A in reaction times Reaction times to random elements Number of errors	<0.05 N.S. N.S.	<0.05 N.S. <0.01 (random) N.S.	- - -	- - -
				(random) (sequential)	(sequential)	(sequential)	- -	- -

	Scheidtmann et al (2001)²⁵	n: 47 (53) tps: 43 ± 27 days (-) a: 62 ± 12 yrs (-) s: 26M/21F sev: not specified	Exp: levodopa 100mg/carbidopa[#] Con: placebo [#] (unspecified ingredients) D: daily x 3 wks, 30 mins prior to Tx Tx: PT x 1hr x 6wks EP: 6wks (f)	Rivermead Assessment Scale	0.02	-	-	-
<i>Irreversible MAO-B inhibitors¹</i>								
selegiline	Bartolo et al (2015) ²⁶	n: 44 (47) tps: 11 ± 2.6 days (9-13 days) a: 65 ± 8.5yrs (55-75 yrs) s: 21M/26F sev: not specified	Exp: selegiline 10mg tablets Con: placebo tablets (unspecified ingredients) D: daily x 6wks Tx: PT x 1hr/day x 6days/wk + cycle/arm-ergometer training x 30mins/day x 5days/wk + OT x 1hr/day x 3days/wk EP: 6wks (t)	National Institute of Health Stroke Scale Functional Independence Measure	- N.S.	- N.S.	- -	- -
	Sivenius et al (2001)²⁷	n: 20 (24) tps: ≤48 hrs [‡] (-) a: 70.23 ± 9.36 yrs (-) s: 9M/11F sev: not specified	Exp: selegiline 5mg tablets + Tx Con: placebo tablets (unspecified ingredients) D: twice daily x 3mo Tx: PT/SP/OT/Neuropsychology, as required EP: 3mo (t)	Scandinavian Stroke Scale <u>Barthel Index</u> <u>Fugl-Meyer Assessment</u>	- - -	<0.02 N.S. N.S.	- - -	1.37 (0.16, 2.42) - -
<i>Methylxanthine drugs²⁸</i>								
theophylline	Schambra et al (2016) ²⁸	n: 18 (20) tps: 8.4 ± 7.8 yrs (0.88 – 35 yrs) a: 64 ± 11 yrs (44 – 88 yrs) s: 13M/5F sev: not specified	Exp: theophylline 300mg extended-release capsule Con: placebo capsule (unspecified ingredients) D: daily x 1 day; crossover with 7-day washout Tx: nil reported EP: 5 hours post dose of intervention (t)	Pinch force dynamometry – both hands Nine-Hole Peg Test (time) – both hands Nine-Hole Peg Test (number of errors) – both hands Resting motor threshold – both hemispheres Short-interval intracortical inhibition (ISI: 1ms) – both hemispheres Short-interval intracortical inhibition (ISI: 1ms) – both hemispheres Long-interval intracortical inhibition – both hemispheres Interhemispheric inhibition – both hemispheres	- - - - - - - -	N.S. N.S. N.S. N.S. N.S. N.S. N.S.	- - - - - - -	- - - - - -
<i>Mood-stabiliser/antimanics²⁹</i>								
lithium carbonate	Mohammadianinejad et al (2014)³⁰	n: 66 (80) tps: ≤ 48 hrs (-) a: 62 ± 5.0 yrs (-) s: 41M/25F sev: not specified	Exp: lithium carbonate 300mg tablet + Tx Con: placebo tablet (talc) + Tx D: twice daily x 30days Tx: PT & OT every 2 days EP: 1mo (t)	<u>Δ modified National Institute of Health Stroke Scale</u> <u>Δ Fugl-Meyer Assessment - hand assessment</u> ↑≥25% Fugl-Meyer Assessment	- - -	N.S. N.S. <0.01	- - -	- - -
<i>Neuropeptides – porcine brain extract¹³</i>								
Cerebrolysin®	Amiri-Nikpour et al (2014)³¹	n: 43 (46) tps: 6 – 24hrs [‡] (-) a: 60 ± 9.7 yrs (-) s: 22M/21F	Exp: Cerebrolysin® 30ml (in saline to 100ml) infusion + Tx Con: placebo infusion (saline) + Tx D: daily x 10 days	National Institute of Health Stroke Scale Δ Mean flow velocity - right middle cerebral artery	<0.01 N.S.	- -	- -	- -

	sev: not specified		Tx: inpatient rehabilitation EP: 3mo (f)	Δ Mean flow velocity - left middle cerebral artery Δ Mean flow velocity - basilar artery Pulsatility index - right middle cerebral artery Pulsatility index - left middle cerebral artery Pulsatility index - basilar artery	N.S. N.S. 0.01 N.S. N.S.	- - - - -	- - - - -	- - - - -
Chang et al (2016) ³²	n: 66 (70) tps: ≤ 7 days [‡] (-) a: 64 ± 7.3 (-) s: 53M/13F sev: moderate	Exp: Cerebrolysin® 30ml (in saline to 100ml) infusion + Tx Con: placebo infusion (saline) + Tx D: daily x 3wk Tx: (PT x 2hrs/day) & (OT x 1hr/day), x five days/wk x 3wk EP: 3mo (f)	Fugl-Meyer Assessment (total, UL, LL) Diffusion tensor imaging – axial diffusivity – affected hemisphere Diffusion tensor imaging – radial diffusivity – affected hemisphere Diffusion tensor imaging – fractional anisotropy – affected hemisphere rsfMRI	N.S. N.S. N.S. N.S. N.S.	N.S. N.S. N.S. N.S. N.S.	- - - - -	- - - - -	- - - - -
Heiss et al (2012) ³³	n: 1067 (1070) tps: 13.25 hrs (-) a: 65.3 ± 12.0 yrs (-) s: 640M/427F sev: mod - severe	Exp: Cerebrolysin® 30ml (in saline to 100ml) infusion + Tx Con: placebo infusion (saline) + Tx D: daily x 10 days Tx: nil reported EP: 3 mo (f)	Global directional test (Δ Barthel Index + modified Rankin Scale + Δ National Institute of Health Stroke Scale)	N.S.	-	-	-	-
Lang et al (2013) ³⁴	n: 100 (119) tps: 138 ± 31.2 mins (-) a: 66.2 ± 10.9 yrs (-) s: 77M/42F sev: not specified	Exp: Cerebrolysin® 30ml (in saline to 100ml) infusion Con: placebo infusion (saline) D: daily x 10 days, initiated 1hr post thrombolytic treatment Tx: nil reported EP: 3 mo (f)	modified Rankin Scale Δ National Institute of Health Stroke Scale Barthel Index	N.S. - N.S.	- N.S. -	- - -	- - -	- - -
Muresanu et al (2016) ³⁵	n: 196 (208) tps: 53.2 ± 1.3 hr (-) a: 64 ± 10.2 yrs (-) s: 133M/75F sev: not specified	Exp: Cerebrolysin® 30 mL infusion (diluted in saline 100ml) + Tx Con: placebo infusion (saline) + Tx D: daily x 21days Tx: massage, passive & active movement of UL & LL x 2hr/day x 5 days/wk x 3wk EP: 3mo (f)	Δ Action Research Arm Test Δ gait velocity Δ Nine-Hole Peg Test Δ National Institute of Health Stroke Scale Δ Barthel Index Δ modified Rankin Scale Δ Short Form 36 items Health Survey - physical component summary	- - - - - - -	<0.01 N.S. N.S. <0.01 <0.01 <0.01 <0.01	- - - - - - -	- - - - - - -	+ 0.80 (0.52, 1.1) - - - - - -
<i>Noradrenaline reuptake inhibitors¹</i>								
reboxetine	Zittel et al (2007) ³⁶	n:10 (10) tps: 42 ± 15 mo (11-67 mo) a: 65 ± 14 yrs (29-83 yrs) s: 7M/3F	Exp: reboxetine 6mg[#] Con: placebo [#] (unspecified ingredients) D: daily x 1 day, crossover with ≥14-day washout	Handgrip force Finger tapping test (number of taps) Nine-Hole Peg Test	- - -	<0.05 <0.05 N.S.	- - -	- - -


		sev: not specified	Tx: PT x 1hr, 1.5hr post administration of intervention EP: 2.5hr post administration of intervention (t)	Motor evoked potential (Transcranial magnetic stimulation)	-	N.S.	-	-
<i>Peripheral chemoreceptor agonists + alkaloid/ vasodilator¹³</i>								
almitrine bismesylate + raubasine	Li et al (2004)³⁷	n: 74 (83) tps: 1 – 3 mo [‡] a: 62 ± 10.4 yrs (-) s: 53M/21F sev: not specified	Exp: almitrine bismesylate 30mg and raubasine 10mg tablet Con: placebo tablet (unspecified ingredients) D: twice daily x 12wk Tx: nil reported EP: 3mo (t)	Barthel Index	0.01	<0.01	+ 0.63 (0.15, 1.1)	+ 0.80 (0.52, 1.08)
				Neurological Functional Deficit Score	0.04	0.02	+ 0.48 (0.02, 0.94)	+ 0.26 (-0.2, 0.71)
<i>Selective norepinephrine reuptake inhibitors¹</i>								
atomoxetine	Ward et al (2017) ³⁸	n: 9 (12) tps: 25 ± 15 mo (6–52 mo) a: 55 ± 10yrs (35–66 yrs) s: 6M/6F sev: mod - severe	Exp: atomoxetine 40mg capsule + Tx Con: placebo capsule (unspecified ingredients) + Tx D: 60mins prior to Tx x 5 days/wk x 2wk Tx: task-oriented UL motor training x 2hr x 5 days/wk x 2wk EP: 1 mo (f)	Fugl-Meyer Assessment Action Research Arm Test Wolf Motor Function Test	- - -	N.S. N.S. N.S.	- - -	- - -
<i>Selective serotonin reuptake inhibitors¹</i>								
citalopram	Acler et al (2009b)³⁹	n: 20 (20) tps: ≤ 10 days [‡] (-) a: 67 ± 8.0 yrs (-) s: 12M/8F sev: not specified	Exp: citalopram 10 mg[#] + Tx Con: placebo [#] (unspecified ingredients) + Tx D: daily x ≥ 4 mo Tx: Bobath x 30 mins/day x ≤ 16wk. EP: 1mo (t)	National Institute of Health Stroke Scale Barthel Index Lindmark Scale Motor threshold – affected hemisphere (TMS) Motor threshold – unaffected hemisphere (TMS) Intracortical Inhibition (ICI) – affected hemisphere (TMS) ICI – unaffected hemisphere (TMS) Motor Evoked Potential (MEP) – affected hemisphere (TMS) MEP – unaffected hemisphere (TMS)	0.03 N.S. N.S. N.S. - N.S. <0.05 N.S. N.S.	- N.S. N.S. N.S. 0.03 N.S. 0.04 N.S. N.S.	+ 0.71 (-0.22, 1.6) - - - - - + 0.49 (-0.42, 1.4) - -	- - - - - - - -
	Zittel et al (2008)⁴⁰	n: 8 (8) tps: 36 ± 30 mo (-) a: 68 ± 7 yrs (-) s: 6M/2F sev: not specified	Exp: citalopram 40mg[#] + Tx Con: placebo [#] + Tx D: day 1, 2.5 hrs prior to Tx; crossover with 14-day washout Tx: PT x 1hr EP: post Tx (t)	Handgrip strength Nine-Hole Peg Test	- 0.029	N.S. 0.01	- -	- -
escitalopram	Gourab et al (2015)⁴¹	n:10 (11) tps: 9.1 ± 7.6 yrs (3-26 yrs) a: 57 ± 10 yrs (35-71 yrs) s: 7M/3F sev: not specified	Exp: escitalopram 10mg overencapsulated capsule Con: placebo overencapsulated capsule (microcrystalline cellulose) D: 4-5 hrs prior to testing; crossover with 7-day washout Tx: nil reported	Maximal ankle isometric strength Maximal knee isometric strength velocity-dependent plantarflexion stretch reflexes: - under passive conditions , at: 30°/sec, 60°/sec; 90°/sec ; 120°/sec	- - - -	N.S. N.S. N.S./ N.S./ 0.03 / N.S.	- - -	- - -

			EP: 5.5-7hr post intervention (t)	- during superimposed maximal volitional drive, at: 30°/sec, 60°/sec; 90°/sec; 120°/sec	N.S./ N.S./N.S/ N.S.	-	-	
				- after superimposed maximal volitional drive, at: 30°/sec, 60°/sec; 90°/sec; 120°/sec	N.S./ N.S./N.S/ N.S.			
				Fugl-Meyer Assessment – LL	N.S.			
				6-minute Walk Test	N.S.			
				10-metre Walk Test	N.S.			
fluoxetine	Chollet et al (2011)⁴²	n: 113 (118) tps: 8.9 ± 1.8 days (-) a: 65 ± 13 yrs (-) s: 72M/46F sev: mod-severe	Exp: fluoxetine 20 mg capsules + Tx Con: placebo capsules (unspecified ingredients) + Tx D: daily x 90days Tx: as per site protocol EP: 3mo (t)	Fugl-Meyer Assessment (FMA) - totalⁱⁱ FMA – ULⁱⁱ FMA – LLⁱⁱ National Institute of Health Stroke Scale (NIHSS)(score 0-5) NIHSS (motor scores) modified Rankin Scaleⁱⁱ	- - <0.01 N.S. 0.01 0.02	<0.01 <0.01 <0.01 - - -	- - - - + 0.50 (0.12, 0.87) -	+ 0.76 (0.37, 1.1) - - - - -
	Dam et al (1996) ^{43,i}	n: 32 (35) tps: 2.9 ± 1.8 mo (-) a: 68 ± 7.3 yrs (-) s: 14M/18F sev: not specified	Exp: fluoxetine 20 mg [#] + Tx Con: placebo [#] (unspecified ingredients) + Tx D: daily x 3mo Tx: (PT x 1-2hrs/day) & (OT x 2 hrs/day) & (SP x 1 hr/day if reqd) x 5 days/wk x 3mo EP: 3mo (t)	Hemiplegic Stroke Scale Barthel Index	N.S. N.S.	- -	- -	- -
	Mikami et al (2013)^{44,i}	n: 46 (61) tps: ≤ 6 mo [‡] (-) a: 18 – 85 yrs [‡] (-) s: exact breakdown unavailable sev: moderate	Exp: fluoxetine 40mg[#] Con: placebo [#] (unspecified ingredients) D: daily x 3mo Tx: individual rehabilitation EP: 12mo (f)	modified Rankin Scale Functional Independence Measure	- -	0.04 N.S.	- -	- -
	Pariente et al (2001)⁴⁵	n: 8 (8) tps: 14 days (7-23 days) a: 62 ± 10.8yrs (43 - 75 yrs) s: 5M/3F sev: not specified	Exp: fluoxetine 20mg[#] Con: placebo [#] (unspecified ingredients) D: 5 hrs prior to first fMRI; crossover with 7-day washout Tx: nil reported EP: 5hrs post administration of intervention (t)	Nine-Hole Peg Test Handgrip strength Finger tapping Motor activation – active task (fMRI) Motor activation – passive task (fMRI)	N.S. < 0.01 < 0.04 < 0.05 N.S.	- - - - -	- - - - -	- - - - -
<i>Sigma-1 receptor agonists⁴⁶</i>								
cutamesine	Urfer et al (2014) ⁴⁶	n: 39 (41) tps: 59 ± 8.2 hrs (48-74 hrs) a: 66 ± 13 yrs (25-83 yrs) s: 20M/21F sev: mod - severe	Exp: cutamesine 1mg capsule + Tx Con: placebo capsule (unspecified ingredients) + Tx D: daily x 1mo Tx: Individual rehabilitation EP: 2mo (f)	Δ National Institute of Health Stroke Scale modified Rankin Scale Barthel Index 10-metre Walk Test	- - - N.S.	N.S. N.S. N.S. -	- - - -	- - - -
		n: 37 (41) tps: 60 ± 7.4 hrs (48-72 hrs) a: 66 ± 12 yrs (25-86 yrs) s: 22M/19F	Exp: cutamesine 3mg capsule + Tx Con: placebo capsule (unspecified ingredients) + Tx D: daily x 1mo	Δ National Institute of Health Stroke Scale modified Rankin Scale Barthel Index	- - -	N.S. N.S. N.S.	- - -	- - -

		sev: mod - severe	Tx: Individual rehabilitation EP: 2mo (f)	10-metre Walk Test	N.S.	-	-	-
<i>Suspected partial NMDA agonists</i> ⁴⁷								
d-cycloserine	Cherry et al (2014) ⁴⁷	n: 20 (20) (experiment 2) tps: 23 ± 12 mo (-) a: 53 ± 10 yrs (-) s: 11M/9F sev: mild-mod	Exp: d-cycloserine 250mg pill Con: placebo pill (unspecified ingredients) D: 1 hour prior to Tx, single dose Tx: motor training EP: Day 2 (t)	Stability platform task Simulated feeding trial Untrained balance task	- - -	N.S. N.S. N.S.	- - -	- - -
<i>Traditional Chinese medicines</i> ⁴⁸⁻⁵⁰								
Di-Huang-Yin-Zi (DHYZ)	Yu et al (2015) ⁵⁰	n: 87 (100) tps: 17 ± 8 days a: 59 ± 12 yrs s: 58M/29F sev: moderate - severe	Exp: Di-Huang-Yin-Zi (DHYZ) (combination of 13 herbal drugs) Con: placebo tablet (medical starch, edible caramel pigment, bitter agent) D: twice/daily x 12 wks Tx: inpatient rehab (PT x 2hr/day) + (OT x 2hr/day) x 6days/wk x 12wks EP: 3mo (t)	Fugl-Meyer Assessment Barthel Index	<0.05 <0.05	<0.05 <0.05	- -	- -
Ginkgo biloba	Oskouei et al (2013) ⁵¹	n: 57 (102) tps: not specified - recruited at admission to hospital for stroke (-) a: 70 ± 12 yrs (-) s: 46M/56F sev: not specified	Exp: Ginkgo biloba 40mg tablet Con: placebo tablet (unspecified ingredients) D: 3 times/day x 4mo Tx: nil reported EP: 4mo (t)	Δ National Institute of Health Stroke Scale (NIHSS) ≥ 50% Δ NIHSS	- -	<0.05 N.S.	- -	- -
MLC 601 (NeuroAid™)	Bavarsad et al (2011) ⁴⁸	n: 68 (80) tps: ≤ 7 days [‡] (-) a: 72 ± 6.1 yrs (-) s: 48M/20F sev: not specified	Exp: MLC 601 (NeuroAid™) ⁱⁱⁱ capsule + Tx Con: placebo capsule (talc) + Tx D: 4 caps x 3 times/day x 12 wk Tx: nil reported EP: 3mo (t)	Δ Mean flow velocity Barthel Index modified Rankin Scale	<0.01 <0.01 -	<0.01 <0.01 -	+ 0.68 (0.18, 1.2) + 0.94 (0.43, 1.4) -	+ 0.97 (0.46, 1.5) + 1.0 (0.50, 1.5) -
	Chen et al (2013) ⁴⁹	n: 841 (1099) tps: 47.95 ± 17.35 hr (-) a: 61.4 ± 11.3 yrs (-) s: 693M/406F sev: mod - severe	Exp: MLC 601 (NeuroAid™) ⁱⁱⁱ capsule + Tx Con: placebo capsule (barley, dried ripe fruit, noodle fish & citric acid) + Tx D: 4 caps x 3 times/day x 3mo Tx: individualised rehabilitation EP: 3mo (t)	Δ modified Rankin Scale (mRS) mRS 0-1 mRS 0-2 Δ National Institute of Health Stroke Scale (NIHSS) ≥ 5points Δ NIHSS (total score –motor score) Barthel Index	- N.S. N.S. - -	N.S. - - N.S. N.S.	- - - -	- - - -
	Kong et al (2009) ⁵²	n: 32 (40) tps: 14.65 days (-) a: 60 ± 11 yrs (-) s: 28M/12F sev: not specified	Exp: MLC 601 (NeuroAid™) ⁱⁱⁱ capsule Con: placebo capsule (barley, dried ripe fruit, noodle fish & citric acid) D: 4 caps x 3 times/day x 4 wk Tx: nil reported EP: 2mo (f)	Fugl-Meyer Assessment Functional Independence Measure National Institute of Health Stroke Scale	- - -	N.S. N.S. N.S.	- - -	- - -
	Venketasubramanian et al (2015) ⁵³	n: 880 (862) tps: 48 ± 17h (-) a: 61.8 ± 11.3 yrs (-) s: 562M/318F sev: not specified	Exp: MLC 601 (NeuroAid™) ⁱⁱⁱ capsule + Tx Con: placebo (barley, dried ripe fruit, noodle fish & citric acid) + Tx D: 4 caps x 3 times/day x 12 wk Tx: individualised rehabilitation EP: 24mo (f)	modified Rankin Scale modified Rankin Scale ≤1 Barthel Index ≥ 95	N.S. N.S. N.S.	- - -	- - -	- - -
<i>Tetracyclic antidepressants</i> ¹³								

maprotiline	Dam et al (1996) ^{43,i}	n: 30 (34) tps: 3.0 ± 1.8 mo (-) a: 68 ± 6.5 yrs (-) s: 13M/17F sev: not specified	Exp: maprotiline 150 mg [#] + Tx Con: placebo [#] (unspecified ingredients) + Tx D: daily x 3mo Tx: (PT x 1-2hrs/day) & (OT x 2 hrs/day) & (SP x 1 hr/day if reqd) x 5 days/wk x 3mo EP: 3mo (t)	Hemiplegic Stroke Scale Barthel Index	N.S. N.S.	- -	- -	- -
<i>Tricyclic antidepressants</i> ¹³								
nortriptyline	Mikami et al (2013) ^{44,i}	n: 40 (51) tps: ≤ 6 mo [‡] (-) a: 18 – 85 yrs [‡] (-) s: exact breakdown unavailable sev: moderate	Exp: nortriptyline 100mg[#] Con: placebo [#] (unspecified ingredients) D: daily x 3mo Tx: individual rehabilitation EP: 12 mo (f)	modified Rankin Scale Functional Independence Measure	- -	<0.01 N.S.	- -	- -
ⁱ study contained more than one intervention arm, as well as a placebo arm. ⁱⁱ adjusted mean ⁱⁱⁱ MLC601: contains nine herbal compounds (Radix astragali, Radix salviae miltiorrhizae, Radix aeoniae rubra, Rhizoma chuanxiong, Radix angelicae sinensis, Carthamus tinctorius, Prunus persica, Radix polygalae and Rhizoma acori tatarinowii) and 5 animal components (including Hirudo, Eupolyphaga seu steleophaga, Calculus bovis artifactus, Buthus martensii and Cornu saigae tataricae) [#] dosage form not specified [‡] inclusion criteria listed where results were not provided								
Δ - change; ADL – activities of daily living; fMRI – functional Magnetic Resonance Imaging; ISI – interstimulus interval; LL – lower limb; MIC _{ips} - ipsilesional primary motor cortex; OT – occupational therapy; PT – physiotherapy; rsfMRI – resting-state Functional Magnetic Resonance Imaging; SP – speech therapy; TEMPA - Upper Extremity Performance Test for the Elderly; TMS – transcranial magnetic stimulation; UL – upper limb								

Table III. Assessment of risk of bias of included studies using the Cochrane Risk of Bias Tool

 Low
 Unsure
 High

	Selection bias - random sequence generation	Selection bias - allocation concealment	Performance bias - blinding of participants and personnel	Detection bias - blinding of outcome assessment	Attrition bias - incomplete outcome data	Reporting bias - selective reporting
Acler et al (2009a) ²¹						
Acler et al (2009b) ³⁹						
Amiri-Nikpour et al (2014) ³¹						
Bartolo et al (2015) ²⁶						
Bavarsad et al (2011) ⁴⁸						
Bochner et al (1973) ²⁰						
Chang et al (2016) ³²						
Chen et al (2013) ⁴⁹						
Cherry et al (2014) ⁴⁷						
Chollet et al (2011) ⁴²						
Cramer et al (2009) ¹⁴						
Cramer et al (2014) ¹⁶						
Cramer et al (2017) ¹⁹						
Crisostomo et al (1988) ²						
Dam et al (1996) ⁴³						
Ehrenreich, H. (2002) ¹⁵						
Floel et al (2005) ²²						
Gladstone et al (2006) ⁴						
Gourab et al (2015) ⁴¹						
Grade et al (1998) ¹⁰						
Heiss et al (2012) ³³						
Kong et al (2009) ⁵²						
Lang et al (2013) ³⁴						
Li et al (2004) ³⁷						
Lokk et al (2011) ¹¹						

Mikami et al (2011) ⁴⁴	?	+	?	+	-	-
Mohammadianinejad et al (2014) ³⁰	+	?	+	+	-	+
Muresanu et al (2016) ³⁵	+	+	+	+	+	+
Oskouei et al (2013) ⁵¹	+	+	?	?	-	+
Pariente et al (2001) ⁴⁵	?	+	+	+	+	-
Platz et al (2005) ⁵	+	+	+	+	-	-
Restemeyer et al (2007) ²³	?	?	+	+	?	-
Ringelstein et al (2013) ¹⁷	?	?	?	+	-	+
Rosser et al (2008) ²⁴	?	+	+	?	+	+
Schaebitz et al (2010) ¹⁸	?	?	?	+	?	+
Schambra et al (2016) ²⁸	?	+	+	+	-	-
Scheidtmann et al (2001) ²⁵	?	?	+	+	-	-
Schuster et al (2011) ⁶	+	+	+	+	-	-
Sivenius et al (2001) ²⁷	+	?	?	?	-	-
Sonde et al (2001) ³	-	?	+	?	-	-
Sprigg et al (2007) ⁷	+	?	?	+	-	-
Tardy et al (2006) ¹²	+	+	+	+	?	-
Treig et al (2003) ⁸	+	+	+	+	-	-
Urfer et al (2014) ⁴⁶	+	?	+	?	+	-
Venketasubramanian et al (2017) ⁵³	+	+	+	+	-	+
Walker-Batson et al (1995) ⁹	?	?	+	+	+	-
Ward et al (2017) ³⁸	+	?	+	+	-	+
Yu et al (2015) ⁵⁰	+	+	+	+	-	-
Zittel et al (2007) ³⁶	?	?	?	?	+	-
Zittel et al (2008) ⁴⁰	?	?	?	?	+	-

Table SIII. Safety results

Study	Deaths due to drug	Serious adverse event attributed to drug int	Drop outs due to SERIOUS adverse events related to drug	Sig. diff in adverse events between tx arms
Acler et al (2009a) ²¹	0	0	2	Not explicitly stated
Acler et al (2009b) ³⁹	0	0	0	Not explicitly stated
Amiri-Nikpour et al (2014) ³¹	0	0	0	no
Bartolo et al (2015) ²⁶	0	0	Not explicitly stated	no
Bavarsad et al (2011) ⁴⁸	0	0	2	Not explicitly stated
Bochner et al (1973) ²⁰	0	0	0	Not explicitly stated
Chang et al (2016) ³²	0	0	0	no
Chen et al (2013) ⁴⁹	0	4	0	no
Cherry et al (2014) ⁴⁷	0	0	0	no
Chollet et al (2011) ⁴²	0	2	0	Not explicitly stated
Cramer et al (2009) ¹⁴	0	0	0	Not explicitly stated
Cramer et al (2014) ¹⁶	0	9	0	Not explicitly stated
Cramer et al (2017) ¹⁹	0	0	0	no
Crisostomo et al (1988) ²	0	0	0	Not explicitly stated
Dam et al (1996) ⁴³	0	0	0	Not explicitly stated
Ehrenreich, H. (2002) ¹⁵	0	0	0	Not explicitly stated
Floel et al (2005) ²²	0	0	0	Not explicitly stated
Gladstone et al (2006) ⁴	0	0	0	no
Gourab et al (2015) ⁴¹	0	0	1	Not explicitly stated
Grade et al (1998) ¹⁰	0	0	0	Not explicitly stated
Heiss et al (2012) ³³	0	50	39	no
Kong et al (2009) ⁵²	0	0	2	no
Lang et al (2013) ³⁴	0	0	0	no
Li et al (2004) ³⁷	0	0	0	no
Lokk et al (2011) ¹¹	0	0	0	Not explicitly stated

Mikami et al (2013) ⁴⁴	0	9	5	Not explicitly stated
Mohammadianinejad et al (2014) ³⁰	0	0	0	Not explicitly stated
Muresanu et al (2016) ³⁵	0	0	5	no
Oskouei et al (2013) ⁵¹	0	Not explicitly stated, nil inferred	Not explicitly stated, nil inferred	Not explicitly stated
Pariente et al (2001) ⁴⁵	0	0	0	Not explicitly stated
Platz et al (2005) ⁵	0	0	0	Not explicitly stated
Restemeyer et al (2007) ²³	0	0	0	no
Ringelstein et al (2013) ¹⁷	1	0	0	no
Rosser et al (2008) ²⁴	0	0	0	no
Schaebitz et al (2010) ¹⁸	0	0	0	no
Schambra et al (2016) ²⁸	0	0	0	no
Scheidtmann et al (2001) ²⁵	0	0	0	Not explicitly stated
Schuster et al (2011) ⁶	0	0	0	Not explicitly stated
Sivenius et al (2001) ²⁷	0	0	0	no
Sonde et al (2001) ³	0	0	0	Not explicitly stated
Sprigg et al (2007) ⁷	0	0	0	no
Tardy et al (2006) ¹²	0	0	0	Not explicitly stated
Treig et al (2006) ⁸	0	0	0	Not explicitly stated
Urfer et al (2014) ⁴⁶	0	0	0	no
Venketasubramanian et al (2015) ⁵³	0	Not explicitly stated	Not explicitly stated	no
Walker-Batson et al (1995) ⁹	0	0	0	Not explicitly stated
Ward et al (2017) ³⁸	0	0	0	no
Yu et al (2015) ⁵⁰	0	0	0	no
Zittel et al (2007) ³⁶	0	0	0	Not explicitly stated
Zittel et al (2008) ⁴⁰	0	0	0	Not explicitly stated

Figure S1. Search strategy – Medline.

# ▲	Searches
1	exp Cerebrovascular Disorders/de, dt, pa, ph, pp [Drug Effects, Drug Therapy, Pathology, Physiology, Physiopathology]
2	exp Stroke/dt, pa, pp, rh, th [Drug Therapy, Pathology, Physiopathology, Rehabilitation, Therapy]
3	1 or 2
4	exp Neurons/de, gd, pa, pd, ph, pp [Drug Effects, Growth & Development, Pathology, Pharmacology, Physiology, Physiopathology]
5	exp Motor Neurons/de, gd, pa, ph, pp [Drug Effects, Growth & Development, Pathology, Physiology, Physiopathology]
6	exp Axons/de, gd, pa, ph, pp [Drug Effects, Growth & Development, Pathology, Physiology, Physiopathology]
7	exp Growth Cones/de, pa, ph [Drug Effects, Pathology, Physiology]
8	exp Brain Chemistry/de, pa, ph [Drug Effects, Pathology, Physiology]
9	exp Neurites/de, pa, ph [Drug Effects, Pathology, Physiology]
10	exp Neurons, Efferent/de, gd, pa, ph, pp [Drug Effects, Growth & Development, Pathology, Physiology, Physiopathology]
11	exp Nerve Growth Factor/de, pk, pd, ph, tu [Drug Effects, Pharmacokinetics, Pharmacology, Physiology, Therapeutic Use]
12	exp Nerve Growth Factors/de, pk, pd, ph, tu [Drug Effects, Pharmacokinetics, Pharmacology, Physiology, Therapeutic Use]
13	exp Synapses/de, gd, pa, pd, ph, pp [Drug Effects, Growth & Development, Pathology, Pharmacology, Physiology, Physiopathology]
14	exp Synaptic Transmission/de, ph [Drug Effects, Physiology]
15	exp Motor Cortex/de, gd, pa, ph, pp [Drug Effects, Growth & Development, Pathology, Physiology, Physiopathology]
16	exp Sensorimotor Cortex/de, gd, pa, ph, pp [Drug Effects, Growth & Development, Pathology, Physiology, Physiopathology]
17	exp Somatosensory Cortex/de, gd, pa, ph, pp [Drug Effects, Growth & Development, Pathology, Physiology, Physiopathology]
18	exp Pyramidal Tracts/de, gd, pa, ph, pp [Drug Effects, Growth & Development, Pathology, Physiology, Physiopathology]
19	exp Efferent Pathways/de, gd, pa, ph, pp [Drug Effects, Growth & Development, Pathology, Physiology, Physiopathology]
20	exp Neuronal Plasticity/de, ph [Drug Effects, Physiology]
21	exp Neurogenesis/de, ph [Drug Effects, Physiology]
22	exp Psychotropic Drugs/
23	exp Antidepressive Agents/
24	exp Biogenic Amines/ad, ag, ai, pk, pd, ph, tu [Administration & Dosage, Agonists, Antagonists & Inhibitors, Pharmacokinetics, Pharmacology, Physiology, Therapeutic Use]
25	exp Dopamine/ad, aa, pk, pd, ph, tu [Administration & Dosage, Analogs & Derivatives, Pharmacokinetics, Pharmacology, Physiology, Therapeutic Use]
26	exp Dopamine Agents/ad, aa, ai, pk, pd, tu [Administration & Dosage, Analogs & Derivatives, Antagonists & Inhibitors, Pharmacokinetics, Pharmacology, Therapeutic Use]
27	exp Catecholamines/ad, ag, ai, de, pk, pd, ph, tu, th [Administration & Dosage, Agonists, Antagonists & Inhibitors, Drug Effects, Pharmacokinetics, Pharmacology, Physiology, Therapeutic Use, Therapy]
28	exp Acetylcholine/ad, ag, aa, ai, pk, pd, ph, tu, th [Administration & Dosage, Agonists, Analogs & Derivatives, Antagonists & Inhibitors, Pharmacokinetics, Pharmacology, Physiology, Therapeutic Use, Therapy]
29	exp Serotonin/ad, aa, pk, pd, ph, tu, th [Administration & Dosage, Analogs & Derivatives, Pharmacokinetics, Pharmacology, Physiology, Therapeutic Use, Therapy]
30	exp Serotonin Agents/ad, pk, pd, tu [Administration & Dosage, Pharmacokinetics, Pharmacology, Therapeutic Use]
31	exp neurotransmitter uptake inhibitors/ or exp "serotonin and noradrenaline reuptake inhibitors"/
32	"Serotonin and Noradrenaline Reuptake Inhibitors"/ad, pk, pd, tu [Administration & Dosage, Pharmacokinetics, Pharmacology, Therapeutic Use]
33	exp Adrenergic Uptake Inhibitors/ad, ag, ai, pk, pd, tu [Administration & Dosage, Agonists, Antagonists & Inhibitors, Pharmacokinetics, Pharmacology, Therapeutic Use]
34	exp Serotonin Uptake Inhibitors/ad, ag, ai, pk, pd, tu [Administration & Dosage, Agonists, Antagonists & Inhibitors, Pharmacokinetics, Pharmacology, Therapeutic Use]
35	exp Norepinephrine/ad, ag, aa, ai, pa, pk, pd, ph, tu, th [Administration & Dosage, Agonists, Analogs & Derivatives, Antagonists & Inhibitors, Pathology, Pharmacokinetics, Pharmacology, Physiology, Therapeutic Use, Therapy]
36	exp GABA Agents/ad, pk, pd, tu [Administration & Dosage, Pharmacokinetics, Pharmacology, Therapeutic Use]
37	exp Neurotransmitter Agents/ad, ag, ai, pk, pd, ph, tu [Administration & Dosage, Agonists, Antagonists & Inhibitors, Pharmacokinetics, Pharmacology, Physiology, Therapeutic Use]
38	exp Cholinergic Agents/ad, pk, pd, tu [Administration & Dosage, Pharmacokinetics, Pharmacology, Therapeutic Use]
39	exp Adrenergic Agents/ad, ai, pk, pd, tu [Administration & Dosage, Antagonists & Inhibitors, Pharmacokinetics, Pharmacology, Therapeutic Use]
40	exp Neurotransmitter Uptake Inhibitors/ad, ag, ai, pk, pd, ph, tu [Administration & Dosage, Agonists, Antagonists & Inhibitors, Pharmacokinetics, Pharmacology, Physiology, Therapeutic Use]
41	exp Glutamic Acid/ad, aa, de, pk, pd, ph, tu [Administration & Dosage, Analogs & Derivatives, Drug Effects, Pharmacokinetics, Pharmacology, Physiology, Therapeutic Use]
42	4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41
43	exp "Recovery of Function"/de, ph [Drug Effects, Physiology]
44	exp Motor Skills/de, pd, ph, pp [Drug Effects, Pharmacology, Physiology, Physiopathology]
45	exp Motor Activity/de, ph, pp [Drug Effects, Physiology, Physiopathology]
46	exp Neurological Rehabilitation/
47	43 or 44 or 45 or 46
48	3 and 42
49	47 and 48
50	exp Neuroprotection/
51	exp Neuroprotective Agents/
52	50 or 51
53	49 not 52
54	53
55	limit 54 to humans

Figure SII. Search strategy – CINAHL

	Search ID#	Search Terms
<input type="checkbox"/>	S26	S19 OR S25
<input type="checkbox"/>	S25	S1 AND S24
<input type="checkbox"/>	S24	S22 AND S23
<input type="checkbox"/>	S23	(MH "Clinical Trials+") OR (MH "Randomized Controlled Trials")
<input type="checkbox"/>	S22	S20 OR S21
<input type="checkbox"/>	S21	(MH "Psychotropic Drugs+") OR (MM "Central Nervous System Agents")
<input type="checkbox"/>	S20	"neuropharmacology"
<input type="checkbox"/>	S19	s17 not s18
<input type="checkbox"/>	S18	(MH "Neuroprotective Agents+")
<input type="checkbox"/>	S17	S15 AND S16
<input type="checkbox"/>	S16	S1 AND S11
<input type="checkbox"/>	S15	S12 OR S13 OR S14
<input type="checkbox"/>	S14	(MH "Motor Activity+/DE/PH")
<input type="checkbox"/>	S13	(MH "Motor Skills+/DE")
<input type="checkbox"/>	S12	(MH "Recovery/PH/PF/DE")
<input type="checkbox"/>	S11	S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10
<input type="checkbox"/>	S10	(MM "Neuronal Plasticity/DE/PH")
<input type="checkbox"/>	S9	(MH "Receptors, Neurotransmitter+/DE/PD/PK/PH/TU")
<input type="checkbox"/>	S8	(MH "Neurotransmitters/DE/PD/PK/PH/TU")
<input type="checkbox"/>	S7	(MH "Cerebral Cortex+/DE/PA/PH/PP")
<input type="checkbox"/>	S6	(MH "Nerve Growth Factors+/DE/PK/PD/PH/TU")
<input type="checkbox"/>	S5	growth cone
<input type="checkbox"/>	S4	Axon*
<input type="checkbox"/>	S3	(MH "Motor Neurons+/DE/PA/PH/PP")
<input type="checkbox"/>	S2	(MH "Neurons+/PA/DE/PH/PP")
<input type="checkbox"/>	S1	(MH "Cerebrovascular Disorders+") OR (MH "Stroke+/DT/PP/PA/RH")

Figure SIII. Search strategy - SCOPUS

Scopus

Scopus SciVal | Nerida Firth ▾ Logout Help ▾



Search	Alerts	Lists	My Scopus
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(TITLE-ABS-KEY ({brain vascular disorder} OR {brain vascular disorders} OR {cerebrovascular disease} OR {cerebrovascular diseases} OR {cerebrovascular disorder} OR {cerebrovascular disorders} OR {cerebrovascular insufficiencies} OR {cerebrovascular insufficiency} OR {cerebrovascular occlusion} OR {cerebrovascular occlusions} OR {intracranial vascular disease} OR {intracranial vascular diseases} OR {intracranial vascular disorder} OR {intracranial vascular disorders} OR {acute cerebrovascular accident} OR {acute cerebrovascular accidents} OR {acute stroke} OR {acute strokes} OR {apoplexy} OR {brain vascular accident} OR {brain vascular accidents} OR {cva} OR {cerebrovascular accident} OR {cerebrovascular accidents} OR {cerebral stroke} OR {cerebral strokes} OR {cerebrovascular stroke} OR {cerebrovascular strokes} OR stroke)) AND (TITLE-ABS-KEY ({axon pruning} OR {axon prunings} OR {axonal pruning} OR {axonal prunings} OR {dendrite arborisation} OR {dendrite arborizations} OR {dendrite pruning} OR {dendrite prunings} OR {dendritic arborisation} OR {dendritic arborizations} OR {dendritic pruning} OR {dendritic prunings} OR {dendritic remodelling} OR {dendritic remodelings} OR {neurite pruning} OR {neurite prunings} OR {neuronal arborisation} OR {neuronal arborizations} OR {neuronal network remodelling} OR {neuronal network remodelings} OR {neuronal plasticities} OR {neuronal plasticity} OR {neuronal pruning} OR {neuronal prunings} OR {neuronal remodelling} OR {neuronal remodelings} OR neuroplast OR {synaptic plasticities} OR {synaptic plasticity} OR {synaptic pruning} OR {synaptic prunings} OR neurogenes*)) AND (TITLE-ABS-KEY ({efferent pathway} OR {efferent pathways} OR {motor pathway} OR {motor pathways} OR {growth cone} OR {growth cones} OR {alpha motor neuron} OR {alpha motor neurons} OR {alpha motoneuron} OR {alpha motoneurons} OR motoneuron* OR {motor neuron} OR {motor neurons} OR {neurite} OR {neurites} OR axon* OR {brain chemistries} OR {brain chemistry} OR {motor area} OR {motor areas} OR {precentral motor area} OR {precentral motor areas} OR {premotor area} OR {premotor areas} OR {primary motor area} OR {primary motor areas} OR {secondary motor area} OR {secondary motor areas} OR {secondary motor cortex} OR {secondary motor cortices} OR {motor cortex} OR {MOTOR CORTICES} OR {motor strip} OR {motor strips} OR {precentral motor cortex} OR {precentral motor cortices} OR {premotor cortex} OR {PREMOTOR CORTICES} OR {primary motor cortex} OR {primary motor cortices} OR {somatic motor area} OR {somatic motor areas} OR {somatomotor area} OR {somatomotor areas} OR {supplementary motor area} OR {supplementary motor areas} OR {nerve cell} OR {nerve cells} OR {neuron} OR {neurons} OR {corticobulbar tract} OR {corticobulbar tracts} OR {corticospinal tract} OR {corticospinal tracts} OR {pyramidal decussation} OR {pyramidal tract} OR {pyramidal tracts} OR {nerve growth factor 1} OR {nerve growth factor alpha subunit} OR {nerve growth factor beta subunit} OR {nerve growth factor gamma subunit} OR {nerve growth factor} OR {beta nerve growth factor} OR {beta-nerve growth factor} OR {nerve growth factor alpha subunits} OR {nerve growth factor beta subunits} OR {nerve growth factor gamma subunits} OR {nerve growth factors} OR {beta nerve growth factors} OR {beta-nerve growth factors} OR {nerve growth factors} OR {neuronal growth associated proteins} OR {neuronal growth-associated proteins} OR {neurotrophic factors} OR {neurotrophic factors} OR {neurotrophic protein} OR {neurotrophic proteins} OR {neurotrophins} OR {neurite outgrowth factor} OR {neuronal growth associated protein} OR {neuronal growth-associated protein} OR {neurotrophic factor} OR {neurotrophic factor} OR {neurotrophin} OR {efferent neuron} OR {efferent neurons} OR {sensorimotor area} OR {sensorimotor areas} OR {sensorimotor cortex} OR {sensorimotor cortices} OR {sensory motor area} OR {sensory motor areas} OR {sensory motor cortex} OR {sensory motor cortices} OR {sensory-motor area} OR {sensory-motor areas} OR {sensory-motor cortex} OR {sensory-motor cortices} OR {anterior parietal cortex} OR {gyrus postcentralis} OR {post central gyrus} OR {postcentral gyrus} OR {primary somatic sensory area} OR {primary somatosensory area} OR {primary somatosensory cortex} OR {primary somatosensory cortices} OR {si cortex} OR {second somatic sensory area} OR {secondary sensory cortex} OR {secondary somatosensory area} OR {secondary somatosensory areas} OR {secondary somatosensory cortex} OR {somatosensory cortex} OR {synapse} OR {synapses} OR {neural transmission} OR {neurotransmission} OR {synaptic transmission})) AND (TITLE-ABS-KEY ({psychoactive agent} OR {psychoactive drug} OR {psychopharmaceutical} OR {psychotropic drug} OR {psychoactive agents} OR {psychoactive drugs} OR {psychopharmaceuticals} OR {psychotropic drugs} OR {antidepressant drug} OR {antidepressant} OR {antidepressive agent} OR {thymoanaleptic} OR {thymoleptic} OR {antidepressant drugs} OR {antidepressants} OR {antidepressive agents} OR {thymoanaleptics} OR {thymoleptics} OR {biogenic amine} OR {biogenic amines} OR dopamine OR {dopamine agent} OR {dopamine drug} OR {dopamine effect} OR {dopamine effects} OR {dopaminergic agents} OR {dopamine agents} OR {dopamine drugs} OR {dopaminergic agent} OR {dopaminergic drug} OR {dopaminergic agents} OR {dopaminergic drugs} OR {dopaminergic effect} OR {dopaminergic effects} OR {catecholamines} OR {sympathins} OR {catecholamine} OR {sympathin} OR acetylcholine OR {5-ht} OR {5-hydroxytryptamine} OR hydroxytryptamine OR serotonin OR {serotonergic agents} OR {serotonergic drugs} OR {serotonin agents} OR {serotonin drugs} OR {serotonergic agent} OR {serotonergic drug} OR {serotonin agent} OR {serotonin drug} OR {serotonin effect} OR {serotonin effects} OR {serotonergic effect} OR {serotonergic effects} OR {nris and ssris} OR {snris} OR {ssris and nris} OR {serotonin and noradrenaline reuptake inhibitor} OR {serotonin and noradrenaline uptake inhibitor} OR {serotonin and norepinephrine reuptake inhibitor} OR {serotonin and norepinephrine uptake inhibitor} OR {serotonin and noradrenaline reuptake inhibitors} OR {serotonin and noradrenaline uptake inhibitors} OR {serotonin and norepinephrine reuptake inhibitors} OR {serotonin and norepinephrine uptake inhibitors} OR {adrenergic reuptake inhibitor} OR {adrenergic uptake inhibitor} OR {adrenergic reuptake inhibitors} OR {adrenergic uptake inhibitors} OR {5 ht uptake inhibitors} OR {5 hydroxytryptamine uptake inhibitors} OR {5-ht uptake inhibitors} OR {5-hydroxytryptamine uptake inhibitors} OR {selective serotonin reuptake inhibitors} OR {serotonin reuptake inhibitors} OR {serotonin uptake inhibitors} OR {norepinephrine} OR {gaba agent} OR {gaba agents} OR {gaba effect} OR {gaba effects} OR {gabaergic agent} OR {gabaergic agents} OR {gabaergic effect} OR {gabaergic effects} OR {gamma aminobutyric acid agent} OR {gamma-aminobutyric acid agent} OR {gamma aminobutyric acid agents} OR {gamma-aminobutyric acid agents} OR {nerve transmitter substances} OR neurohormone* OR neurohumor* OR neuromodulator* OR neuroregulator* OR neurosteroid* OR {neurotransmitter agents} OR {nerve transmitter substance} OR {neurotransmitter agent} OR {neurotransmitter} OR {neurotransmitters} OR {acetylcholine agent} OR {acetylcholine agents} OR {cholinergic agent} OR {cholinergic agents} OR {cholinergic drug} OR {cholinergic drugs} OR {cholinergic effect} OR {cholinergic effects} OR cholinergic* OR cholinomimetic* OR {muscarinic agent} OR {muscarinic agents} OR {muscarinic effect} OR {muscarinic effects} OR muscarinic* OR {nicotinic agent} OR {nicotinic agents} OR {nicotinic effect} OR {nicotinic effects} OR {adrenergic agent} OR {adrenergic drug} OR {adrenergic agents} OR {adrenergic drugs} OR {adrenergic effect} OR {adrenergic effects} OR {adrenergic neurohumor depleter} OR {adrenergic neurohumor depleters} OR {adrenergic neuron agents} OR {adrenergic neuron drugs} OR {adrenergic release inhibitors} OR {adrenergic synthesis inhibitors} OR {adrenergics} OR {adrenergic neuron agent} OR {adrenergic neuron drug} OR {adrenergic release inhibitor} OR {adrenergic synthesis inhibitor} OR {adrenergic} OR {sympathetic transmitter releaser} OR {sympathetic transmitter releasers} OR {neurotransmitter reuptake inhibitor} OR {neurotransmitter uptake inhibitor} OR {neuronal transmitter uptake inhibitor} OR {neurotransmitter reuptake inhibitors} OR {neurotransmitter uptake inhibitors} OR {neuronal transmitter uptake inhibitors} OR {glutamate} OR {glutamic acid})) AND (TITLE-ABS-KEY ({function recoveries} OR {function recovery} OR {recovery of function} OR {locomotor activities} OR {locomotor activity} OR {motor activities} OR {motor activity} OR {physical activities} OR {physical activity} OR {neurologic rehabilitation} OR {neurological rehabilitation} OR {neuropsychology} OR {motor skill} OR {motor skills} OR convalesc*))

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Figure SIV. Search strategy - Embase

No.	Query
#68	#43 AND #67
#67	#2 AND #66
#66	#34 AND #65
#65	#27 AND #64
#64	#44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52 OR #53 OR #54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63
#63	'neuropharmacology'/exp OR 'neuropharmacology' AND [humans]/lim
#62	'glutamic acid'/exp OR 'glutamic acid' AND [humans]/lim
#61	'adrenergic receptor stimulating agent'/exp OR 'adrenergic receptor stimulating agent' AND [humans]/lim
#60	'cholinergic receptor stimulating agent'/exp OR 'cholinergic receptor stimulating agent' AND [humans]/lim
#59	'gabaergic receptor affecting agent'/exp OR 'gabaergic receptor affecting agent' AND [humans]/lim
#58	'noradrenalin'/exp OR 'noradrenalin' AND [humans]/lim
#57	'serotonin uptake inhibitor'/exp OR 'serotonin uptake inhibitor' AND [humans]/lim
#56	'adrenergic receptor affecting agent'/exp OR 'adrenergic receptor affecting agent' AND [humans]/lim
#55	'serotonin noradrenalin reuptake inhibitor'/exp OR 'serotonin noradrenalin reuptake inhibitor' AND [humans]/lim
#54	'serotonin receptor affecting agent'/exp OR 'serotonin receptor affecting agent' AND [humans]/lim
#53	'serotonin'/exp OR 'serotonin' AND [humans]/lim
#52	'dopamine'/exp OR 'dopamine' AND [humans]/lim
#51	'acetylcholine'/exp OR 'acetylcholine' AND [humans]/lim
#50	'catecholamine'/exp OR 'catecholamine' AND [humans]/lim
#49	'dopamine receptor stimulating agent'/exp OR 'dopamine receptor stimulating agent' AND [humans]/lim
#48	'antidepressive agents'/exp OR 'antidepressive agents' AND [humans]/lim
#47	'neurotransmitter'/exp OR neurotransmitter AND uptake AND inhibitor AND [humans]/lim
#46	agents AND interacting AND with AND transmitter, AND 'hormone'/exp OR 'drug'/exp AND receptors AND [humans]/lim
#45	'biogenic amine'/exp OR 'biogenic amine' AND [humans]/lim
#44	'psychotropic agent'/exp OR 'psychotropic agent' AND [humans]/lim
#43	#36 OR #38 OR #40 OR #42
#42	#41 AND ('clinical trial'/link OR 'drug administration'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug dose concentration'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link OR 'rehabilitation'/link OR 'therapy'/link)
#41	'motor performance'/exp OR 'motor performance' AND [humans]/lim
#40	#39 AND ('clinical trial'/link OR 'drug administration'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link OR 'rehabilitation'/link OR 'therapy'/link)
#39	'motor activity'/exp OR 'motor activity' AND [humans]/lim
#38	#37 AND ('clinical trial'/link OR 'drug administration'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'pharmacology'/link OR 'rehabilitation'/link OR 'therapy'/link)
#37	'convalescence'/exp OR 'convalescence' AND [humans]/lim
#36	#35 AND ('clinical trial'/link OR 'drug administration'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'endogenous compound'/link OR 'pharmacology'/link OR 'rehabilitation'/link OR 'therapy'/link)
#35	'neurorehabilitation'/exp OR 'neurorehabilitation' AND [humans]/lim
#34	#31 OR #32 OR #33
#33	#28 AND ('clinical trial'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug development'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link OR 'rehabilitation'/link OR 'therapy'/link)
#32	#29 AND ('clinical trial'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug development'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link OR 'therapy'/link)
#31	#30 AND ('clinical trial'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug development'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link OR 'rehabilitation'/link OR 'therapy'/link)
#30	'synaptogenesis'/exp OR 'synaptogenesis' AND [humans]/lim
#29	'nervous system development'/exp OR 'nervous system development' AND [humans]/lim
#28	'nerve cell plasticity'/exp OR 'nerve cell plasticity' AND [humans]/lim
#27	#4 OR #6 OR #8 OR #10 OR #12 OR #14 OR #16 OR #18 OR #20 OR #22 OR #24 OR #26
#26	#25 AND ('clinical trial'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link OR 'rehabilitation'/link OR 'therapy'/link)
#25	'sensorimotor cortex'/exp OR 'sensorimotor cortex' AND [humans]/lim
#24	#23 AND ('clinical trial'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link OR 'rehabilitation'/link OR 'therapy'/link)
#23	'somatosensory cortex'/exp OR 'somatosensory cortex' AND [humans]/lim
#22	#21 AND ('clinical trial'/link OR 'disease management'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link OR 'rehabilitation'/link OR 'therapy'/link)
#21	'motor cortex'/exp OR 'motor cortex' AND [humans]/lim
#20	#19 AND ('clinical trial'/link OR 'disease management'/link OR 'drug administration'/link OR 'drug combination'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacology'/link OR 'rehabilitation'/link OR 'therapy'/link)
#19	'pyramidal tract'/exp OR 'pyramidal tract' AND [humans]/lim
#18	#17 AND ('clinical trial'/link OR 'drug administration'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link OR 'rehabilitation'/link OR 'therapy'/link)
#17	'efferent nerve'/exp OR 'efferent nerve' AND [humans]/lim
#16	#15 AND ('clinical trial'/link OR 'drug administration'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacology'/link OR 'rehabilitation'/link)
#15	'motoneuron'/exp OR 'motoneuron' AND [humans]/lim
#14	#13 AND ('clinical trial'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug development'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link)
#13	'synapse'/exp OR 'synapse' AND [humans]/lim
#12	#11 AND ('clinical trial'/link OR 'drug administration'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug development'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link)
#11	'nerve growth factor'/exp OR 'nerve growth factor' AND [humans]/lim
#10	#9 AND ('clinical trial'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug concentration'/link OR 'drug development'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link)
#9	'growth cone'/exp OR 'growth cone' AND [humans]/lim
#8	#7 AND ('clinical trial'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug development'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link OR 'therapy'/link)
#7	'neurite'/exp OR 'neurite' AND [humans]/lim
#6	#5 AND ('clinical trial'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug development'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link OR 'therapy'/link)
#5	'nerve fiber'/exp OR 'nerve fiber' AND [humans]/lim
#4	#3 AND ('clinical trial'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug development'/link OR 'drug dose'/link OR 'drug therapy'/link OR 'drug toxicity'/link OR 'endogenous compound'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link OR 'therapy'/link) AND [humans]/lim
#3	'nerve cell'/exp OR 'nerve cell'
#1	#1 AND ('clinical trial'/link OR 'disease management'/link OR 'drug combination'/link OR 'drug comparison'/link OR 'drug therapy'/link OR 'pharmacokinetics'/link OR 'pharmacology'/link OR 'rehabilitation'/link OR 'therapy'/link)
#1	'cerebrovascular accident'/exp OR 'cerebrovascular accident'

Figure SV. Search strategy – Web of Science

Search History: Web of Science™ Core Collection		
Set	Results	
		Save History / Create Alert Open Saved History
# 9	87	#8 AND #5 <i>Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years</i>
# 8	2,281	#7 AND #1 <i>Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years</i>
# 7	160,332	#6 AND #4 <i>Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years</i>
# 6	684,557	#3 OR #2 <i>Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years</i>
# 5	166,006	TS=(“function recovers” OR “function recovery” OR “recovery of function” OR “locomotor activities” OR “locomotor activity” OR “motor activities” OR “motor activity” OR “physical activities” OR “physical activity” OR “neurologic rehabilitation” OR “neurological rehabilitation” OR “neuropsychology” OR “motor skill” OR “motor skills” OR “convalesc”) <i>Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years</i>
# 4	710,705	TS=(“psychoactive agent” OR “psychoactive drug” OR “psychopharmaceutical” OR “psychotropic drug” OR “psychoactive agents” OR “psychoactive drugs” OR “psychopharmaceuticals” OR “psychotropic drugs” OR “antidepressant drug” OR “antidepressant” OR “antidepressive agent” OR “thymoaanaleptic” OR “thymoleptic” OR “antidepressant drugs” OR “antidepressants” OR “antidepressive agents” OR “thymoaanaleptics” OR “thymoleptics” OR “biogenic amine” OR “biogenic amines” OR dopamine OR “dopamine agent” OR “dopamine drug” OR “dopamine effect” OR “dopamine effects” OR “dopaminergic agents” OR “dopamine agents” OR “dopamine drugs” OR “dopaminergic agent” OR “dopaminergic drug” OR “dopaminergic agents” OR “dopaminergic drugs” OR “dopaminergic effect” OR “dopaminergic effects” OR “catecholamines” OR “sympathins” OR “catecholamine” OR “sympathin” OR ACETYLCHOLINE OR “5-HT” OR “5-hydroxytryptamine” OR hydroxytryptamine OR serotonin OR “serotonergic agents” OR “serotonergic drugs” OR “serotonin agents” OR “serotonin drugs” OR “serotonergic agent” OR “serotonergic drug” OR “serotonin agent” OR “serotonin drug” OR “serotonin effect” OR “serotonin effects” OR “serotonergic effect” OR “serotonergic effects” OR “nris and sris” OR “snris” OR “ssris and nris” OR “serotonin and noradrenaline reuptake inhibitor” OR “serotonin and noradrenaline uptake inhibitor” OR “serotonin and norepinephrine reuptake inhibitor” OR “serotonin and norepinephrine uptake inhibitor” OR “serotonin and noradrenaline reuptake inhibitors” OR “serotonin and norepinephrine reuptake inhibitors” OR “serotonin and norepinephrine uptake inhibitors” OR “adrenergic reuptake inhibitor” OR “adrenergic uptake inhibitor” OR “adrenergic reuptake inhibitors” OR “adrenergic uptake inhibitors” OR “5-HT uptake inhibitors” OR “5-HT hydroxytryptamine uptake inhibitors” OR “5-HT uptake inhibitors” OR “5-hydroxytryptamine uptake inhibitors” OR “selective serotonin reuptake inhibitors” OR “serotonin reuptake inhibitors” OR “serotonin uptake inhibitors” OR “noradrenaline” OR “norepinephrine” OR “gaba agent” OR “gaba agents” OR “gaba effect” OR “gaba effects” OR “gabaergic agent” OR “gabaergic agents” OR “gabaergic effect” OR “gabaergic effects” OR “gamma aminobutyric acid agent” OR “gamma-aminobutyric acid agent” OR “gamma aminobutyric acid agents” OR “gamma-aminobutyric acid agents” OR “neurotransmitter substances” OR neurohormone OR neurohumor OR neuromodulator OR neuroregulator OR neurosteroid OR “neurotransmitter agents” OR ACETYLCHOLINE OR “neurotransmitter agent” OR “neurotransmitter” OR “neurotransmitters” OR “acetylcholine agent” OR “acetylcholine agents” OR “cholinergic agent” OR “cholinergic agents” OR “cholinergic drug” OR “cholinergic drugs” OR “cholinergic effect” OR “cholinergic effects” OR cholinergic OR cholinomimetic OR “muscarinic agent” OR “muscarinic agents” OR “muscarinic effect” OR “muscarinic effects” OR muscarinic OR “nicotinic agent” OR “nicotinic agents” OR “nicotinic effect” OR “nicotinic effects” OR “adrenergic agent” OR “adrenergic drug” OR “adrenergic agents” OR “adrenergic drugs” OR “adrenergic effect” OR “adrenergic effects” OR “adrenergic neurohumor depletor” OR “adrenergic neurohumor depleters” OR “adrenergic neuron agents” OR “adrenergic neuron drugs” OR “adrenergic release inhibitors” OR “adrenergic synthesis inhibitors” OR “adrenergics” OR “adrenergic neuron agent” OR “adrenergic neuron drug” OR “adrenergic release inhibitor” OR “adrenergic synthesis inhibitor” OR “adrenergic” OR “sympathetic transmitter releaser” OR “sympathetic transmitter releasers” OR “neurotransmitter reuptake inhibitor” OR “neurotransmitter uptake inhibitor” OR “neuronal transmitter uptake inhibitor” OR “neurotransmitter reuptake inhibitors” OR “neurotransmitter uptake inhibitors” OR “neuronal transmitter uptake inhibitors” OR “glutamate” OR “glutamic acid”) <i>Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years</i>
# 3	660,768	TS=(“efferent pathway” OR “efferent pathways” OR “motor pathways” OR “motor pathway” OR “growth cone” OR “growth cones” OR “alpha motor neuron” OR “alpha motor neurons” OR “alpha motoneuron” OR “alpha motoneurons” OR motoneuron OR “motor neuron” OR “motor neurons” OR “neurite” OR “neurites” OR axon OR “brain chemistries” OR “brain chemistry” OR “motor area” OR “motor areas” OR “precentral motor area” OR “precentral motor areas” OR “premotor area” OR “premotor areas” OR “primary motor area” OR “primary motor areas” OR “secondary motor area” OR “secondary motor areas” OR “secondary motor cortex” OR “secondary motor cortices” OR “motor cortex” OR “MOTOR CORTICES” OR “motor strip” OR “motor strips” OR “precentral motor cortex” OR “precentral motor cortices” OR “premotor cortex” OR “PREMOTOR CORTICES” OR “primary motor cortex” OR “primary motor cortices” OR “somatic motor area” OR “somatic motor areas” OR “somatomotor area” OR “somatomotor areas” OR “supplementary motor area” OR “supplementary motor areas” OR “neuron” OR “neurons” OR “corticobulbar tract” OR “corticobulbar tracts” OR “corticospinal tract” OR “corticospinal tracts” OR “pyramidal decussation” OR “pyramidal tract” OR “pyramidal tracts” OR “neuron growth factor 1” OR “neuron growth factor alpha subunit” OR “neuron growth factor beta subunit” OR “neuron growth factor gamma subunit” OR “neuron growth factor” OR “beta neuron growth factor” OR “beta-neuron growth factor” OR “neuron growth factor alpha subunits” OR “neuron growth factor beta subunits” OR “neuron growth factor gamma subunits” OR “neuron growth factors” OR “beta neuron growth factors” OR “beta-neuron growth factors” OR “neuron growth factors” OR “neurite outgrowth factors” OR “neuronal growth associated proteins” OR “neuronal growth-associated proteins” OR “neurotrophic factors” OR “neurotrophic protein” OR “neurotrophic proteins” OR “neurotrophins” OR “neurite outgrowth factor” OR “neuronal growth associated protein” OR “neuronal growth-associated protein” OR “neurotrophic factor” OR “neurotrophic factors” OR “neurotrophin” OR “efferent neuron” OR “efferent neurons” OR “sensorimotor area” OR “sensorimotor areas” OR “sensorimotor cortex” OR “sensorimotor cortices” OR “sensory motor area” OR “sensory motor areas” OR “sensory motor cortex” OR “sensory motor cortices” OR “sensory-motor area” OR “sensory-motor areas” OR “sensory-motor cortex” OR “sensory-motor cortices” OR “anterior parietal cortex” OR “gyrus postcentralis” OR “post central gyrus” OR “postcentral gyrus” OR “primary somatic sensory area” OR “primary somatosensory area” OR “primary somatosensory areas” OR “primary somatosensory cortex” OR “primary somatosensory cortices” OR “si cortex” OR “second somatic sensory area” OR “secondary sensory cortex” OR “secondary somatosensory area” OR “secondary somatosensory areas” OR “secondary somatosensory cortex” OR “somatosensory cortex” OR “synapse” OR “synapses” OR “neural transmission” OR “neurotransmission” OR “synaptic transmission”) <i>Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years</i>
# 2	65,782	TS=(“axon pruning” OR “axon prunings” OR “axonal pruning” OR “axonal prunings” OR “dendrite arborisation” OR “dendrite arborizations” OR “dendrite pruning” OR “dendrite prunings” OR “dendritic arborisation” OR “dendritic arborizations” OR “dendritic pruning” OR “dendritic prunings” OR “dendritic remodelling” OR “dendritic remodelings” OR “neurite pruning” OR “neurite prunings” OR “neuronal arborisation” OR “neuronal arborizations” OR “neuronal network remodelling” OR “neuronal network remodelings” OR “neuronal plasticities” OR “neuronal plasticity” OR “neuronal pruning” OR “neuronal prunings” OR “neuronal remodelling” OR “neuronal remodeling” OR “neuronal remodelings” OR neuroplast OR “synaptic plasticities” OR “synaptic plasticity” OR “synaptic pruning” OR “synaptic prunings” OR neurogenes) <i>Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years</i>
# 1	260,891	TS=(“brain vascular disorder” OR “brain vascular disorders” OR “cerebrovascular disease” OR “cerebrovascular diseases” OR “cerebrovascular disorder” OR “cerebrovascular disorders” OR “cerebrovascular insufficiencies” OR “cerebrovascular insufficiency” OR “cerebrovascular occlusion” OR “cerebrovascular occlusions” OR “intracranial vascular disease” OR “intracranial vascular diseases” OR “intracranial vascular disorder” OR “intracranial vascular disorders” OR “acute cerebrovascular accident” OR “acute cerebrovascular accidents” OR “acute stroke” OR “acute strokes” OR apoplexy OR “brain vascular accident” OR “brain vascular accidents” OR cva OR “cerebrovascular accident” OR “cerebrovascular accidents” OR “cerebral stroke” OR “cerebral strokes” OR “cerebrovascular stroke” OR “cerebrovascular strokes” OR stroke) <i>Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years</i>

Figure sVI. Search strategy - CENTRAL - (Cochrane Database)

Study 1_SR_20160830_updated
To search an exact word(s) use quotation marks, e.g. "hospital" finds hospital; hospital (no quotation marks) finds hospital and hospitals; pay finds paid, pays, paying, p

[Add to top](#)

−	+	#1	MeSH descriptor: [Stroke] explode all trees	
−	Edit	+	#2	Recovery of Function
−	Edit	+	#3	NEURONAL PLASTICITY
−	Edit	+	#4	#1 and #2
−	Edit	+	#5	drug
−	Edit	+	#6	#4 and #5
−	Edit	+	#7	human
−	Edit	+	#8	#6 and #7
−	Edit	+	#9	motor recovery
−	Edit	+	#10	#8 and #9
−	Edit	+	#11	#10 in Trials
−	+	#12	MeSH descriptor: [Neuronal Plasticity] explode all trees	
−	+	#13	MeSH descriptor: [Recovery of Function] explode all trees	
−	Edit	+	#14	#1 and #12 and #13
−	Edit	+	#15	#1 and #13
−	+	#16	MeSH descriptor: [Pharmaceutical Preparations] explode all trees	
−	Edit	+	#17	#15 and #16
−	+	#18	MeSH descriptor: [Humans] explode all trees	
−	Edit	+	#19	#17 and #18
−	Edit	+	#20	#11 or #17

Figure sVII. Search strategy – Trials Databases

Ongoing trial searches

- **ClinicalTrials.gov:**
 - **Strategy:** "stroke" AND "recovery" AND "drug"

- **WHO International Clinical Trials Registry Platform**
 - **Strategy:** stroke AND recovery

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