Table 1

Relative abundance of retrograde and anterograde labeling resulting from three separate experiments of combined cholera toxin B subunit (CTB) and *Phaseolus vulgaris* leucoagglutinin (PHAL) injections within the lateral hypothalamic area (LHA) of male rats; two of these were centered within the LHA juxtaparaventricular region (LHAjp, caudal = experiment LHA#22; rostral = experiment LHA#62), the other (experiment LHA#11) was centered within midrostrocaudal levels of the LHA suprafornical region (LHAs) -- listed as "central LHAs" in column title for brevity. The relative abundance of labeling (retrogradely – CTB – labeled neurons or anterogradely – PHAL – labeled fibers) is represented by the following semi-quantitative grading schema: − = absence of labeling; + = very low; ++ = low; +++ = moderate; ++++ = high; +++++ = very high; +++++* = region of highest amount of retrograde labeling for each experiment. Regions that contained PHAL-labeled axons with the appearance of fibers of passage, or regions that contained only a single CTB-labeled neuron, or PHAL-labeled fiber, are not included in the table (for further details see Fig. 4). The brain region hierarchy follows Swanson (2004).

	ANTEROGRADE (PHAL)			RETROGRADE (CTB)		
	rostral LHAjp (LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)	rostral LHAjp LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)
CELL GROUP OR REGION						
1. Cerebrum						
1.1. Cerebral Cortex						
1.1.1. Cortical Plate						
Sensory-motor cortex						
Somatomotor areas						
secondary somatomotor area (MOs)	−	−	−	−	+	−
Visceral sensory-motor areas						
infralimbic area (ILA)	−	−	−	++++	++	++++
Olfactory areas						
anterior olfactory nucleus						
posteroventral part (AONpv)	−	−	−	+	−	−
tenia tecta						
dorsal part (TTd)	−	−	−	+++	++	++
ventral part (TTv)	−	−	−	+	−	−
piriform area (PIR)	−	−	−	+	+	−
postpiriform transition area (TR)	−	−	−	−	−	+
nucleus of the lateral olfactory tract (NLOT)	−	−	−	+	−	−
cortical amygdalar area						
anterior part (COAa)	−	−	−	++	+	+
posterior part						

	ANTEROGRADE (PHAL)			RETROGRADE (CTB)			
	rostral LHAjp (LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)	rostral LHAjp LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)
lateral zone (COApl)	–	+	–	+	–	–
medial zone (COApm)	–	–	–	+	–	–
Polymodal association cortex						
anterior cingulate area						
dorsal part (ACAd)	–	–	–	‡	‡	+
ventral part (ACAv)	–	–	–	+	‡	+
prelimbic area (PL)	–	–	–	‡‡‡	‡	‡
orbital area						
lateral part (ORBl)	–	–	–	–	–	+
medial part (ORBm)	–	–	–	–	+	–
ventral part (ORBv)	–	–	–	+	–	+
ventrolateral part (ORBvl)	–	–	–	–	+	+
agranular insular area						
dorsal part (Ald)	–	–	–	–	–	‡‡‡
ventral part (Alv)	–	–	–	–	–	+
posterior part (Alp)	–	–	–	–	–	‡
retrosplenial area						
ventral part (RSPv)	–	–	–	–	‡	–
hippocampal formation						
retrohippocampal region						
entorhinal area						
lateral part (ENTl)	–	–	–	+	–	–
medial part, dorsal zone (ENTm)	–	–	–	‡	+	–
presubiculum (PRE)	–	–	–	+	+	–
parasubiculum (PAR)	–	–	–	–	‡	–
subiculum						
pyramidal layer (SUB-sp)	–	–	–	‡‡‡*	‡‡‡*	‡‡
hippocampal region						
Ammon's horn						
field CA1						

	ANTEROGRADE (PHAL)			RETROGRADE (CTB)		
	rostral LHAjp (LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)	rostral LHAjp LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)
pyramidal layer						
deep (CA1spd)	–	–	–	++++*	+++	+
superficial (CA1sps)	–	–	–	+++	++	–
stratum oriens (CA1so)	–	–	–	+	–	–
field CA2	–	–	–	+	–	–
pyramidal layer (CA2sp)						
field CA3						
pyramidal layer (CA3sp)	–	–	–	++	–	–
stratum oriens (CA3so)	–	–	–	+	+	–
1.1.2. Cortical Subplate						
Claustrum (CLA)	–	–	–	+	–	++
Endopiriform nucleus						
dorsal part (EPd)	–	–	–	+	–	+
Basolateral amygdalar nucleus						
posterior part (BLAp)	–	–	–	+	+	+
anterior part (BMAa)	–	–	–	+	+	+
Posterior amygdalar nucleus (PA)	–	–	–	+	–	–
1.2. Cerebral Nuclei						
1.2.1. Striatum						
Nucleus accumbens (ACB) ("shell" region)	–	–	+	+	+	+
Lateral septal complex						
lateral septal nucleus						
caudal (caudodorsal) part						
dorsal zone						
rostral region (LSc.d.r)	–	–	++	++	++	++
dorsal region (LSc.d.d)	–	–	–	–	+	–
lateral region (LSc.d.l)	–	–	–	+	–	–
ventral region (LSc.d.v)	–	–	–	+	+	+
ventral zone						
medial region						

	ANTEROGRADE (PHAL)			RETROGRADE (CTB)		
	rostral LHAjp (LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)	rostral LHAjp LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)
dorsal domain (LSc.v.m.d)	–	–	+	‡	+	+
ventral domain (LSc.v.m.v)	–	+	+	+	–	+
intermediate region (LSc.v.i)	–	+	–	‡	‡	+
lateral region						
dorsal domain (LSc.v.l.d)	–	–	–	‡	–	+
ventral domain (LSc.v.l.v)	–	+	+	‡	+	+
rostral (rostroventral) part						
medial zone						
dorsal region (LSr.m.d)	‡	‡	+	‡	‡	+
ventral region						
rostral domain (LSr.m.v.r)	–	+	+	‡	‡	+
caudal domain (LSr.m.v.c)	–	+	+	‡	‡	+
ventrolateral zone						
dorsal region (LSr.vl.d)						
medial domain (LSr.vl.d.m)	‡	‡	+	‡	‡	+
lateral domain (LSr.vl.d.l)	‡	+	+	‡	‡	+
ventral region (LSr.vl.v)	–	+	+	‡	–	+
dorsolateral zone						
medial region						
dorsal domain (LSr.dl.m.d)	–	+	+	‡	‡	+
ventral domain (LSr.dl.m.v)	‡	–	–	‡	–	+
lateral region						
dorsal domain (LSr.dl.l.d)	–	+	+	‡	‡	‡
ventral domain (LSr.dl.l.v)	–	+	+	–	+	–
ventral part (LSv)	+	+	–	+	–	–
septofimbral nucleus (SF)	+	+	+	‡	‡	+
septohippocampal nucleus (SH)	–	–	+	+	–	‡
Anterior amygdalar area (AAA)	–	–	–	–	–	+
Central amygdalar nucleus						
medial part (CEAm)	–	–	+	–	+	+

	ANTEROGRADE (PHAL)			RETROGRADE (CTB)		
	rostral LHAjp (LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)	rostral LHAjp LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)
lateral part (CEAl)	–	–	–	–	–	++
capsular part (CEAc)	–	–	+	–	+	+
Medial amygdalar nucleus						
anterodorsal part (MEAad)	++	+	–	++	++	++
anteroventral part (MEAav)	–	+	–	–	+	–
posterodorsal part						
sublayer a (MEApd-a)	–	–	–	+	+	+
sublayer b (MEApd-b)	–	–	+	+	–	–
sublayer c (MEApd-c)	–	+	–	+	–	–
posteroventral part (MEApv)	–	–	–	+	+	–
1.2.2. Pallidum						
Substantia innominata (SI)	–	–	+++	+	–	+++
Medial septal complex						
Medial septal nucleus (MS)	+++	++	+++	++	+	+
Diagonal band nucleus (NDB)	++	+	+++	+++	++	+
Triangular nucleus septum (TRS)	–	+	+	++	–	+
Bed nuclei of the stria terminalis						
Anterior division						
anterolateral area (BSTal)	–	+	+++	+	–	++
anteromedial area (BSTam)	–	++	+++	+++	+	+++*
dorsomedial nucleus (BSTdm)	++	+	+++	+	+	++
fusiform nucleus (BSTfu)	–	–	–	–	–	++
ventral nucleus (BSTv)	–	+	++	++	+	+
magnocellular nucleus (BSTmg)	–	–	++	+	–	+
Posterior division						
principal nucleus (BSTpr)	++	++	–	+++	++	++
interfascicular nucleus (BSTif)	+++	++	+	+++	++	++
transverse nucleus (BSTtr)	–	–	–	+	–	+
dorsal nucleus (BSTd)	–	–	–	–	+	–
2. Cerebellum	–	–	–	–	–	–

	ANTEROGRADE (PHAL)			RETROGRADE (CTB)		
	rostral LHAjp (LHA#62)	**caudal LHAjp (LHA#22)**	**central LHAs (LHA#11)**	**rostral LHAjp LHA#62)**	**caudal LHAjp (LHA#22)**	**central LHAs (LHA#11)**
3. Cerebrospinal Trunk						
3.1 Sensory System						
3.1.1. Thalamus						
Sensory-motor cortex related						
Ventral group of the dorsal thalamus						
subparafascicular nucleus thalamus						
magnocellular part (SPFm)	−	+	−	+	−	−
parvicellular part						
lateral division (SPFpl)	−	−	−	+	−	−
Polymodal association cortex related						
Lateral group of the dorsal thalamus						
lateral posterior nucleus thalamus (LP)	−	+	−	−	−	−
Anterior group of the dorsal thalamus						
anteroventral nucleus thalamus (AV)	−	++	−	+	+	−
anteromedial nucleus thalamus						
dorsal part (AMd)	−	+	−	−	−	−
ventral part (AMv)	−	++	−	−	−	−
anterodorsal nucleus thalamus (AD)	−	+	−	−	−	−
interanteromedial nucleus thalamus (IAM)	−	+	−	−	−	−
interanterodorsal nucleus thalamus (IAD)	−	++	−	−	−	−
lateral dorsal nucleus thalamus (LD)	−	+	−	−	−	−
Medial group of the dorsal thalamus						
mediodorsal nucleus thalamus						
medial part (MDm)	−	++	+	−	−	−
lateral part (MDl)	−	+	−	−	−	−
intermediodorsal nucleus thalamus (IMD)	−	−	++	−	−	+
perireuniens nucleus (PR)	−	++	−	−	−	−
Midline group of the dorsal thalamus						
paraventricular nucleus thalamus (PVT)	+++	+++	++++	+++	++	++
paratenial nucleus (PT)	++	++++	++	+	+	−

	ANTEROGRADE (PHAL)			RETROGRADE (CTB)		
	rostral LHAjp (LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)	rostral LHAjp LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)
nucleus reuniens						
rostral division						
anterior part (REa)	++	++++	+	–	+	–
dorsal part (REd)	–	++	–	+	+	–
ventral part (REv)	–	+++++	–	+	–	–
lateral part (REl)	++	++++	–	+	–	–
median part (REm)	–	+	+	–	–	–
caudal division						
caudal part (REc)	–	+	+	+	+	–
dorsal part (REcd)	–	+	–	–	–	–
median part (REcm)	–	+	–	–	–	–
Intralaminar group of the dorsal thalamus						
rhomboid nucleus (RH)	–	+	+	–	–	–
central medial nucleus thalamus (CM)	+	++	++	–	+	–
central lateral nucleus thalamus (CL)	–	+	+	–	–	–
parafascicular nucleus (PF)	–	–	–	+	–	–
Reticular nucleus thalamus (RT)	–	+	+	+	–	–
3.1.2. Visual	–	–	–	–	–	–
3.1.3. Somatosensory	–	–	–	–	–	–
3.1.4. Auditory	–	–	–	–	–	–
3.1.5. Gustatory						
Nucleus of the solitary tract, medial part, rostral zone (NTSmr)	–	–	+++	–	–	–
3.1.6. Visceral						
Nucleus of the solitary tract						
commissural part (NTSco)	–	–	+	–	–	–
lateral part (NTSl)	–	–	+	–	–	–
medial part, caudal zone (NTSmc)	–	–	+++	–	+	+
Parabrachial nucleus						
lateral division						

	ANTEROGRADE (PHAL)			RETROGRADE (CTB)		
	rostral LHAjp (LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)	rostral LHAjp LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)
central lateral part (PBlc)	–	–	+++	+	+	++
dorsal lateral part (PBld)	–	–	–	–	–	+
external lateral part (PBle)	–	–	+	–	–	+
ventral part (PBlv)	–	–	+	–	–	+++
medial division						
medial medial part (PBmm)	–	–	++	–	–	+
3.1.7. Humerosensory						
Subformical organ (SFO)	–	–	–	–	–	++
3.2. Behavioral state system						
Suprachiasmatic nucleus (SCH)	–	–	–	+	–	–
Subparaventricular zone (SBPV)	+++	+++	+++	++	–	+
Hypothalamic lateral zone, dorsal region (LHAd)	–	++	+++	+	++	++
Supramammillary nucleus						
medial part (SUMm)	–	+	+	+	–	–
lateral part (SUMl)	–	++	+	+	+	+
Pedunculopontine nucleus (PPN)	–	–	++	+	–	+
Pontine reticular nucleus, rostral part (PRNr)	–	–	++	–	–	–
Raphé nuclei						
interfascicular nucleus raphé (IF)	–	+	–	–	–	–
interpeduncular nucleus						
lateral subnucleus						
intermediate part (IPNli)	–	–	+	–	–	–
rostral linear nucleus raphé (RL)	–	+	+	–	–	–
central linear nucleus raphé (CLI)	–	–	+	–	–	+
superior central nucleus raphé						
lateral part (CSl)	–	–	–	–	+	–
dorsal nucleus raphé (DR)	–	++	++	+	–	+
nucleus incertus						
diffuse part (NId)	–	–	–	+	–	–

	ANTEROGRADE (PHAL)			RETROGRADE (CTB)		
	rostral LHAjp (LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)	rostral LHAjp LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)
nucleus raphé magnus (RM)	–	–	+	–	–	–
Locus ceruleus (LC)	–	–	+	–	–	–
3.3. Motor System						
3.3.1. Behavior Control Column						
Medial preoptic nucleus						
lateral part (MPNl)	‡	+	–	‡	‡	‡
medial part (MPNm)	–	+	+	‡	+	‡
central part (MPNc)	–	–	–	+	–	+
Anterior hypothalamic nucleus						
anterior part (AHNa)	‡	+	–	‡	‡	+
central part (AHNc)	‡	‡	+	‡*	‡	‡
posterior part (AHNp)	‡	‡	+	‡	+	+
dorsal part (AHNd)	‡	‡	–	+	–	–
Paraventricular nucleus hypothalamus, descending division						
dorsal parvicellular part (PVHdp)	–	+	–	–	–	–
lateral parvicellular part (PVHlp)	–	+	‡	–	–	+
forniceal part (PVHf)	–	–	‡	–	–	–
Ventromedial hypothalamic nucleus						
anterior part (VMHa)	+	‡	+	+	–	–
dorsomedial part (VMHdm)	‡	‡	+	‡	‡	‡
central part (VMHc)	‡	‡	+	‡	‡	+
ventrolateral part (VMHvl)	+	‡	+	‡	‡	+
Ventral premammillary nucleus (PMv)	–	–	+	+	+	+
Dorsal premammillary nucleus (PMd)	‡	‡	–	+	–	+
Mammillary body						
medial mammillary nucleus						
body (MM)	–	‡	–	–	–	–
median part (MMme)	–	‡	–	–	–	–
Ventral tegmental area (VTA)	–	+	‡	‡	‡	+

	ANTEROGRADE (PHAL)			RETROGRADE (CTB)		
	rostral LHAjp (LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)	rostral LHAjp LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)
Midbrain reticular nucleus, retrorubral area (RR)	–	–	+++	+	–	–
Midbrain reticular nucleus, parvicellular part (MRNp)	–	+	+++	+	–	–
3.3.2. Superior Colliculus, motor related						
Intermediate gray layer						
sublayer a (SCig-a)	–	+	–	–	–	–
sublayer b (SCig-b)	–	+	++	–	+	–
sublayer c (SCig-c)	–	+	+	+	+	+
Deep gray layer (SCdg)	–	–	+	–	+	–
3.3.3. Postcerebellar and Precerebellar Nuclei	–	–	–	–	–	–
3.3.4. Vestibulomotor regions	–	–	–	–	–	–
3.3.5. Central Gray						
Epithalamus						
lateral habenula (LH)	++++	++++	++	–	–	–
Posterior hypothalamic nucleus (PH)	++++	++++	+++	++++	+++	++++
Periaqueductal gray						
precommissural nucleus (PRC)	++	+++	+	++	++	+
commissural nucleus (COM)	–	+	+++	+	–	++
rostromedial division (PAGrm)	–	+	+++	–	++	++
rostrolateral division (PAGrl)	–	–	+	–	–	–
medial division (PAGm)	++	+++	+++	+	+	–
dorsal division (PAGd)	+	+	++	++	++	+
dorsolateral division (PAGdl)	–	–	+	++	–	–
ventrolateral division (PAGvl)	+++	+++	++++	+++	++	+++
nucleus of Darkschewitsch (ND)	–	–	+	+	–	–
Pontine central gray, general						
pontine central gray (PCG)	–	+	+++	+	++	+++
lateral tegmental nucleus (LTN)	–	–	+	+	–	++
Barrington's nucleus (B)	–	–	++++	–	–	–
3.3.6. Hypothalamic Periventricular Region						

	ANTEROGRADE (PHAL)			RETROGRADE (CTB)		
	rostral LHAjp (LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)	rostral LHAjp LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)
Median preoptic nucleus (MEPO)	–	+	‡	‡	+	‡‡
Suprachiasmatic preoptic nucleus (PSCH)	–	–	–	–	–	+
Anteroventral periventricular nucleus (AVPV)	–	–	–	+	+	‡
Anterodorsal preoptic nucleus (ADP)	–	+	–	+	+	+
Anteroventral preoptic nucleus (AVP)	–	–	+	+	–	‡
Parastrial nucleus (PS)	–	+	–	–	–	‡
Medial preoptic area (MPO)	‡	+	‡	‡	‡	‡
Anterior hypothalamic area (AHA)	‡	‡	+	‡	‡	‡
Dorsomedial hypothalamic nucleus						
anterior part (DMHa)	‡	‡	‡	‡	+	‡
posterior part (DMHp)	–	–	+	+	–	‡
ventral part (DMHv)	–	–	–	‡	+	‡
Periventricular hypothalamic nucleus, posterior part (PVp)	–	+	–	+	+	‡
Internuclear area, hypothalamic periventricular region (I)	‡	‡	+	‡	‡	‡
3.3.7 Reticular Formation						
Hypothalamic lateral zone, motor related						
lateral preoptic area (LPO)	‡	+	‡	‡	‡	‡
lateral hypothalamic area, motor related (LHAmo)						
juxtaparaventricular region (LHAjp)	‡	‡	‡	‡	+	‡
juxtadorsomedial region (LHAjd)	‡	‡	‡	‡	‡	‡
juxtaventromedial region						
dorsal zone (LHAjvd)	‡	‡	‡	+	–	+
ventral zone (LHAjvv)	‡	‡	‡	‡	‡	‡
anterior region						
dorsal zone (LHAad)	‡	‡	‡	‡	‡	‡
intermediate zone (LHAai)	‡	‡	‡	+	‡	‡
ventral zone (LHAav)	‡	‡	‡	‡	‡	‡
retrochiasmatic area (RCH)	‡	‡	+	‡	+	‡

	ANTEROGRADE (PHAL)			RETROGRADE (CTB)		
	rostral LHAjp (LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)	rostral LHAjp LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)
tuberal nucleus (TU)						
subventromedial part (TUsv)	–	+	+	+	–	+
intermediate part (TUi)	–	+	–	+	–	+
lateral part (TUl)	–	–	–	+	–	–
supraformical region (LHAs)	+++	+++	++	+	+	++
subfornical region						
anterior zone (LHAsfa)	–	–	–	+	–	+
posterior zone (LHAsfp)	–	+	++	++	+	++
premammillary zone (LHAsfpm)	–	+	–	+	+	–
magnocellular nucleus (LHAm)	–	–	+	–	–	–
parvicellular region (LHApc)	–	–	+	–	–	–
ventral region						
medial zone (LHAvm)	–	+	+	+	–	++
lateral zone (LHAvl)	–	–	+	–	–	–
posterior region (LHAp)	–	+	+++	–	+	–
preparasubthalamic nucleus (PST)	–	–	+	–	–	–
parasubthalamic nucleus (PSTN)	–	–	+	–	–	–
Zona incerta, general						
zona incerta (ZI)	++	+++	+	+++	++	+
pretectal region						
posterior pretectal nucleus (PPT)	–	–	–	+	–	–
medial pretectal area (MPT)	–	+	–	+	+	–
midbrain reticular nucleus, magnocellular part, general						
midbrain reticular nucleus, magnocellular part (MRNm)	–	+	++	+	+	+
ventral tegmental nucleus (VTN)	–	+	–	+	–	–
cuneiform nucleus (CUN)	–	–	–	–	+	–
pontine reticular nucleus, caudal part (PRNc)	–	–	+++	–	–	–
gigantocellular reticular nucleus (GRN)	–	–	+++	–	–	–

	ANTEROGRADE (PHAL)			RETROGRADE (CTB)		
	rostral LHAjp (LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)	rostral LHAjp LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)
paragigantocellular reticular nucleus (PGRN)						
dorsal part (PGRNd)	–	–	+	–	–	–
lateral part (PGRNl)	–	–	‡	–	–	–
parapyramidal nucleus (PPY)						
deep part (PPYd)	–	–	+	–	–	–
magnocellular reticular nucleus (MARN)	–	–	+‡	–	–	–
parvicellular reticular nucleus (PARN)	–	–	‡	–	–	–
medullary reticular nucleus (MDRN)						
ventral part (MDRNv)	–	–	+	–	–	–
3.3.8. Motoneuron Groups						
Neuroendocrine motor zone						
magnocellular						
paraventricular nucleus hypothalamus, magnocellular division						
posterior magnocellular part						
medial zone (PVHpmm)	–	–	+	–	–	–
lateral zone (PVHpml)	–	‡	+	–	–	–
parvicellular						
paraventricular nucleus hypothalamus, parvicellular division						
anterior parvicellular part (PVHap)	+	+	‡	+‡	‡	‡
medial parvicellular part, dorsal zone (PVHmpd)	–	+	+‡	+	+	+
periventricular part (PVHpv)	–	+	+	+	+	+
periventricular hypothalamic nucleus, anterior part (PVa)	–	–	–	+	–	+
periventricular hypothalamic nucleus, intermediate part (PVi)	–	+	–	+	–	+
arcuate hypothalamic nucleus (ARH)	–	+	–	+	–	‡
Preganglionic autonomic pools						
parasympathetic						
inferior salivatory nucleus (ISN)	–	–	+	–	–	–

	ANTEROGRADE (PHAL)			RETROGRADE (CTB)		
	rostral LHAjp (LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)	rostral LHAjp LHA#62)	caudal LHAjp (LHA#22)	central LHAs (LHA#11)
dorsal motor nucleus of the vagus nerve (DMX)	–	–	++	–	–	–