

Brain Maps 4--Editing notes. Check for:

- Endnote annotations for each term are in progress
 - [after date before comma: discovered, current name (species)]

TABLE C

RAT CNS GRAY MATTER REGIONS 4.0 (TOPOGRAPHIC HISTOLOGICAL GROUPINGS)

This hierarchical Nomenclature Table and the next (Table D) provide sets of standard terms for describing the *gray matter regions* (Swanson & Bota, 2010) and *white matter tracts* (Bell & Bell, 1826) of the adult rat *central nervous system* (Carus, 1814). They are revised versions of Tables B and C, respectively, in the third edition of *Brain maps: structure of the rat brain* (Swanson, 2004).

In Table B of Swanson (2004) the parts (gray matter regions) were arranged according to the four-systems structure-function network model of Swanson (2003). Here they are arranged strictly topographically, and in the same order used for the adult human *central nervous system* (Carus, 1814) in *Neuroanatomical terminology* (Swanson, 2014), Appendix Table 3. Both arrangements (functional and topographic) of essentially the same parts are useful for different purposes, as are arrangements based on connections (Bota et al., 2015) and other criteria (Swanson, 2000 [TINS]). It is likely that a strictly topographic ordering is the most straightforward approach to creating a pan-mammalian neuroanatomical terminology. It is purely descriptive of physical structure, and thus more straightforward than the more difficult problem of functional organization.

Highlighted in **bold red text** are gray matter regions as defined by Swanson & Bota (2010): they are recognizable volumes of *gray matter* (Meckel, 1817) that are distinguished by a unique set of neuron types with a unique spatial distribution. In the Table C gray matter regionalization hierarchy here, *gray matter regions* (Swanson & Bota, 2010) occupy the lowest level, equivalent to species in plant and animal taxonomy, except when gray matter subregions (indicated by *italics*, and equivalent to subspecies in biological taxonomy) have been identified, and thus occupy the lowest level. This clarification of regions and subregions was dictated by the emergence of connectomics, where a list of parts is required to create an adjacency (connection) matrix. This approach to choosing a list for a macroconnectome—connections between *gray matter regions* (Swanson & Bota, 2010)—was used systematically by Bota et al. (2015). For example, **primary visual area (>1840)** is a gray matter region at the “species” level whereas its gray matter subregion *layers 1-6 (>1840)* are at the “subspecies” level. The distinction between “species” and “subspecies” levels is not as clear for nonlaminated gray matter regions, and here the basic criterion for distinction lies with the preponderance of current connective evidence to justify inclusion at the “species” level. In animal taxonomy, subspecies is the only taxon allowed below species (International Commission on Zoological Nomenclature, 1999).

The ordering of topographic parts follows the conventions adopted in *Neuroanatomical terminology* (Swanson, 2014), and are based on embryological principles of general developmental

sequence: rostral before caudal (cardinal axis), then medial before lateral (first transverse axis), and then ventral before dorsal (second transverse axis).

CENTRAL NERVOUS SYSTEM [RAT] (CARUS, 1814) (CNS), or CEREBROSPINAL AXIS [RAT] (MECKEL, 1817) (SPA)

Endbrain (Kuhlenbeck, 1927) (EB) or Cerebrum (Obersteiner & Hill, 1900) (CH)

Cerebral nuclei (Swanson, 2000a)

Pallidum (Swanson, 2000a)

Globus pallidus (Burdach, 1822)

Medial globus pallidus (>1840) (GPm from GPi)

Lateral globus pallidus (>1840) (GPL from GPe)

Innominate substance (Schwalbe, 1881)¹ or Substantia innominata (Schwalbe, 1881) (SI)

Magnocellular nucleus (Loo, 1931) (MA)

Medial septal complex (Swanson et al., 1989) (MSC)

Medial septal nucleus (Cajal, xxxx) (MS)

Diagonal band nucleus (>1840) (NDB)

Triangular septal nucleus (Cajal, xxxx) (TRS)

Bed nuclei of terminal stria (Gurdjian, 1925)² (BST)

Anterior division (Ju & Swanson, 1989) (BSTa)

Anteromedial area (Dong & Swanson, 2006)³ (BSTam)

Fusiform nucleus (Ju & Swanson, 1989) (BSTfu)

Ventral nucleus (Ju & Swanson, 1989) (BSTv)

Magnocellular nucleus (Ju & Swanson, 1989) (BSTmg)

Dorsomedial nucleus (Ju & Swanson, 1989)⁴ (BSTdm)

Anterolateral area (Swanson, 2004)⁵ (BSTal)

Oval nucleus (Ju & Swanson, 1989) (BSTov)

Juxtacapsular nucleus (McDonald, 1983)⁶ (BSTju)

Rhomboid nucleus (Ju & Swanson, 1989) (BSTrh)

Posterior division (Ju & Swanson, 1989) (BSTp)

Principal nucleus (Ju & Swanson, 1989)⁷ (BSTpr)

Interfascicular nucleus (Ju & Swanson, 1989)⁸ (BSTif)

Transverse nucleus (Ju & Swanson, 1989) (BSTtr)

Premedullary nucleus (Ju & Swanson, 1989) (BSTpm)

Dorsal nucleus (Ju & Swanson, 1989) (BSTd)

Cell-sparse zone (Ju & Swanson, 1989) (BSTsz)

Strial extension (Ju & Swanson, 1989) (BSTse)

Bed nucleus of anterior commissure (Gurdjian, 1928) (BAC)

Bed nucleus of stria medullaris (Risold & Swanson, 1995) (BSM)

Striatum (Swanson, 2000a)

Olfactory tubercle (Calleja, 1893) (OT)

molecular layer (>1840) (OT1)

pyramidal layer (>1840) (OT2)

polymorph layer (>1840) (OT3)

islands of Calleja (>1840) (isl)

major island of Calleja (>1840) (islm)

Accumbens nucleus (Ziehen, 1897-1901) (ACB)

Lateral septal complex (Risold & Swanson, 1997)

Lateral septal nucleus (Cajal, 1909-1911) (LS)⁹

Rostral (rostroventral) part (Risold & Swanson, 1997) (LSr)

Medial zone (Risold & Swanson, 1997) (LSr.m)

Ventral region (Risold & Swanson, 1997) (LSr.m.v)

rostral domain (Risold & Swanson, 1997) (LSr.m.v.r)

caudal domain (Risold & Swanson, 1997) (LSr.m.v.c)

Dorsal region (Risold & Swanson, 1997) (LSr.m.d)

Ventrolateral zone (Risold & Swanson, 1997) (LSr.vl)

Ventral region (Risold & Swanson, 1997) (LSr.vl.v)

Dorsal region (Risold & Swanson, 1997) (LSr.vl.d)

medial domain (Risold & Swanson, 1997) (LSr.vl.d.m)

lateral domain (Risold & Swanson, 1997) (LSr.vl.d.l)

Dorsolateral zone (Risold & Swanson, 1997) (LSr.dl)

Medial region (Risold & Swanson, 1997) (LSr.dl.m)

ventral domain (Risold & Swanson, 1997) (LSr.dl.m.v)

dorsal domain (Risold & Swanson, 1997) (LSr.dl.m.d)

Lateral region (Risold & Swanson, 1997) (LSr.dl.l)

ventral domain (Risold & Swanson, 1997) (LSr.dl.l.v)

dorsal domain (Risold & Swanson, 1997) (LSr.dl.l.d)

Caudal (caudodorsal) part (Risold & Swanson, 1997) (LSc)

Ventral zone (Risold & Swanson, 1997) (LSc.v)

Medial region (Risold & Swanson, 1997) (LSc.v.m)

ventral domain (Risold & Swanson, 1997) (LSc.v.m.v)

dorsal domain (Risold & Swanson, 1997) (LSc.v.m.d)

Intermediate region (Risold & Swanson, 1997) (LSc.v.i)

- Lateral region (Risold & Swanson, 1997)** (LSc.v.l)
 - ventral domain (Risold & Swanson, 1997)* (LSc.v.l.v)
 - dorsal domain (Risold & Swanson, 1997)* (LSc.v.l.d)
- Dorsal zone (Risold & Swanson, 1997)** (LSc.d)
 - rostral region (Risold & Swanson, 1997)* (LSc.d.r)
 - dorsal region (Risold & Swanson, 1997)* (LSc.d.d)
 - lateral region (Risold & Swanson, 1997)* (LSc.d.l)
 - ventral region (Risold & Swanson, 1997)* (LSc.d.v)
- Ventral part (Risold & Swanson, 1997)** (LSv)
- Septohippocampal nucleus (>1840)** (SH)
- Septofimbrial nucleus (>1840)** (SF)
- Striatal fundus (>1840)** (FS)
- Caudoputamen (Heimer & Wilson, 1975)** (CP)
- Anterior amygdalar area (>1840)** (AAA)
- Central amygdalar nucleus (Johnston, 1923)
 - Medial part (>1840)** (CEAm)
 - Lateral part (>1840)** (CEAl)
 - Capsular part (>1840)** (CEAc)
- Intercalated amygdalar nuclei (>1840)** (IA)
- Medial amygdalar nucleus (Johnston, 1923)
 - Anteroventral part (>1840)** (MEAav)
 - Anterodorsal part (>1840)** (MEAd)
 - Posteroventral part (>1840)** (MEApv)
 - Posterodorsal part (>1840)** (MEApd)
 - sublayer a (>1840)* (MEApd-a)
 - sublayer b (>1840)* (MEApd-b)
 - sublayer c (>1840)* (MEApd-c)
- Bed nucleus of accessory olfactory tract (>1840)** (BA)
- Cerebral cortex (>1840) (CTX)
 - Cortical plate (>1840) (CTXpl)
 - Limbic region (>1840)
 - Olfactory region (>1840) (OLF)
 - Olfactory bulb (Weitbrecht, 1751) (OB)
 - Main olfactory bulb (>1840)** (MOB)
 - glomerular layer (>1840)* (MOBgl)
 - outer plexiform layer (>1840)* (MOBopl)
 - mitral layer (>1840)* (MOBmi)

inner plexiform layer (>1840) (MOBipl)
granule cell layer (>1840) (MOBgr)
Accessory olfactory bulb (>1840) (AOB)
glomerular layer (>1840) (AOBgl)
mitral layer (>1840) (AOBmi)
granular layer (>1840) (AOBgr)
Anterior olfactory area (nucleus) (Herrick, 1910) (AON)
molecular layer (>1840) (AON1)
pyramidal layer (>1840) (AON2)
 Tenia tecta (Swanson, 1992) (TT)
Ventral part (Swanson, 1992) (TTv)
layers 1-3 (Swanson, 1992) (TTv1-3)
Dorsal part (Swanson, 1992) (TTd)
layers 1-4 (Swanson, 1992) (TTd1-4)
Piriform area (Smith, 1919) (PIR)
molecular layer (>1840) (PIR1)
pyramidal layer (>1840) (PIR2)
polymorph layer (>1840) (PIR3)
 Cortical amygdalar complex (Swanson, 2014)
 Cortical amygdalar area (>1840) (COA)
Anterior part (>1840) (COAa)
 Posterior part (>1840) (COAp)
Medial zone (>1840) (COApm)
Lateral zone (>1840) (COApl)
Nucleus of lateral olfactory tract (>1840) (NLOT)
Piriform-amygdalar area (Canteras et al., 1992) (PAA)
Postpiriform transition area (Canteras et al., 1992) (TR)
 Hippocampal formation (Swanson & Cowan, 1977) (HPF)
 Hippocampal region (Swanson et al., 1987) (HIP)
Indusium griseum (Valentin, 1841) (IG)
Fasciola cinerea (Arnold, 1838b) (FC)
Dentate gyrus (>1840) (DG)
molecular layer (>1840) (DGmo)
granule cell layer (>1840) (DGsg)
polymorph layer (>1840) (DGpo)
 Ammon's horn (Vicq d'Azyr, 1784) (CA)
Field CA3 (Lorente de Nó, 1934) (CA3)

stratum lacunosum-moleculare (>1840) (CA3slm)

stratum radiatum (>1840) (CA3sr)

stratum lucidum (>1840) (CA3slu)

pyramidal layer (>1840) (CA3sp)

stratum oriens (>1840) (CA3so)

Field CA2 (Lorente de Nó, 1934) (CA2)

stratum lacunosum-moleculare (>1840) (CA2slm)

stratum radiatum (>1840) (CA2sr)

pyramidal layer (>1840) (CA2sp)

stratum oriens (>1840) (CA2so)

Field CA1 (Lorente de Nó, 1934) (CA1)

Ventral part (Cenquizca & Swanson, 2006) CA1v)

stratum lacunosum-moleculare (>1840) (CA1slm)

stratum radiatum (>1840) (CA1sr)

deep pyramidal layer (>1840) (CA1spd)

superficial pyramidal layer (>1840) (CA1sps)

stratum oriens (>1840) (CA1so)

Dorsal part (Cenquizca & Swanson, 2006) CA1d)

stratum lacunosum-moleculare (>1840) (CA1slm)

stratum radiatum (>1840) (CA1sr)

deep pyramidal layer (>1840) (CA1spd)

superficial pyramidal layer (>1840) (CA1sps)

stratum oriens (>1840) (CA1so)

Retrohippocampal region (Swanson et al., 1987) (RHP)

Subiculum (>1840) (SUB)

Ventral part (>1840) (SUBv)

molecular layer (>1840) (SUBv-m)

stratum radiatum (>1840) (SUBv-sr)

pyramidal layer (>1840) (SUBv-sp)

Dorsal part (>1840) (SUBd)

molecular layer (>1840) (SUBd-m)

stratum radiatum (>1840) (SUBd-sr)

pyramidal layer (>1840) (SUBd-sp)

Parasubiculum (>1840) (PAR)

layers 1-6 (>1840) (PAR1-6)

Presubiculum (>1840) (PRE)

layers 1-6 (>1840) (PRE1-6)

Postsubiculum (Swanson & Cowan, 1977) (POST)
layers 1-6 (>1840) (POST1-6)
 Entorhinal area (Brodmann, 1909) (ENT)
 Medial part, ventral zone (Haug, 1976) (ENTmv)
 layers 1-6 (>1840) (ENTm1-6)
 Medial part, dorsal zone (>1840) (ENTm)
 layers 1-6 (>1840) (ENTm1-6)
 Lateral part (>1840) (ENTl)
 layers 1-6 (>1840) (ENTl1-6)
 Cingulate region (Brodmann, 1909) (CNG)
 Infralimbic area (Rose & Woolsey, 1948) (ILA)
 layers 1-6 (>1840) (ILA1-6)
 Prelimbic area (>1840) (PL)
 layers 1-6 (>1840) (PL1-6)
 Anterior cingulate area (>1840) (ACA)
 Ventral part (>1840) (ACAv)
 layers 1-6 (>1840) (ACAv1-6)
 Dorsal part (>1840) (ACAd)
 layers 1-6 (>1840) (ACAd1-6)
 Retrosplenial region [was area in 04] (>1840) (RSP)
 Ventral part (>1840) (RSPv)
 Zone a (>1840) (RSPv.a)
 layers 1-6 (>1840) (RSPv.a1-6)
 Zone b/c (>1840) (RSPv.b/c)
 layers 1-6 (>1840) (RSPv.b/c1-6)
 Dorsal part (>1840) (RSPd)
 layers 1-6 (>1840) (RSPd1-6)
 Lateral agranular part (>1840) (RSPagl)
 Insular region (Brodmann, 1909) (INS)
 Agranular insular area (>1840) (AI)
 Ventral part (>1840) (AIv)
 layers 1-6 (>1840) (AIv1-6)
 Dorsal part (>1840) (AId)
 layers 1-6 (>1840) (AId1-6)
 Posterior part (>1840) (AIp)
 layers 1-6 (>1840) (AIp1-6)
 Gustatory area (>1840) (GU)

layers 1-6 (>1840) (GU1-6)
Visceral area (>1840) (VISC)
layers 1-6 (>1840) (VISC1-6)
 Frontal region (Vicq d'Azyr, 1786) (FRO)
 Orbital area (>1840) (ORB)
Ventral part (>1840) (ORBv)
layers 1-6 (>1840) (ORBv1-6)
Ventrolateral part (>1840) (ORBvl)
layers 1-6 (>1840) (ORBvl1-6)
Medial part (>1840) (ORBm)
layers 1-6 (>1840) (ORBm1-6)
Lateral part (>1840) (ORBl)
layers 1-6 (>1840) (ORBl1-6)
 Somatomotor areas (>1840) (MO)
Primary somatomotor area (>1840) (MOp)
layers 1-6 (>1840) (MOp1-6)
Secondary somatomotor areas (>1840) (MOs)
layers 1-6 (>1840) (MOs1-6)
 Parietal region (>1840) (PTL)
 Somatosensory areas (>1840) (SS)
Primary somatosensory area (>1840) (SSp)
barrel field layers 1-6 (>1840) (SSp-bfd1-6)
lower limb field layers 1-6 (>1840) (SSp-ll1-6)
mouth field layers 1-6 (>1840) (SSp-m1-6)
nose field layers 1-6 (>1840) (SSp-n1-6)
trunk field layers 1-6 (>1840) (SSp-tr1-6)
upper limb field layers 1-6 (>1840) (SSp-ul1-6)
Supplemental somatosensory area (>1840) (SSs)
layers 1-6 (>1840) (SSs1-6)
Posterior parietal association areas (>1840) (PTLp)
layers 1-6 (>1840) (PTLp1-6)
 Temporal region (>1840) (TE)
Perirhinal area (Brodmann, 1909) (PERI)
layers 1-6 (>1840) (PERI1-6)
Ectorhinal area (Brodmann, 1909) (ECT)
layers 1-6 (>1840) (ECT1-6)
Temporal association areas (>1840) (TEa)

- layers 1-6 (>1840) (TEa1-6)*
- Auditory areas (>1840) (AUD)
 - Ventral auditory areas (>1840) (AUDv)**
 - layers 1-6 (>1840) (AUDv1-6)*
 - Primary auditory area (>1840) (AUDp)**
 - layers 1-6 (>1840) (AUDp1-6)*
 - Dorsal auditory areas (>1840) (AUDd)**
 - layers 1-6 (>1840) (AUDd1-6)*
 - Posterior auditory area (>1840) (AUDpo)**
 - layers 1-6 (>1840) (AUDpo1-6)*
- Occipital region (Vesalius, 1543a) (OCC)
 - Visual areas (VIS)
 - Rostralateral visual area (>1840) (VISrl)**
 - layers 1-6 (>1840) (VISrl1-6)*
 - Anterolateral visual area (>1840) (VISal)**
 - layers 1-6 (>1840) (VISal1-6)*
 - Anterior laterolateral visual area (>1840) (VISlla)**
 - layers 1-6 (>1840) (VISlla1-6)*
 - Laterolateral visual area (>1840) (VISll)**
 - layers 1-6 (>1840) (VISll1-6)*
 - Intermediolateral visual area (>1840) (VISli)**
 - layers 1-6 (>1840) (VISli1-6)*
 - Mediolateral visual area (>1840) (VISlm)**
 - layers 1-6 (>1840) (VISlm1-6)*
 - Posterolateral visual area (>1840) (VISpl)**
 - layers 1-6 (>1840) (VISpl1-6)*
 - Primary visual area (>1840) (VISp)**
 - layers 1-6 (>1840) (VISp1-6)*
 - Anteromedial visual area (>1840) (VISam)**
 - layers 1-6 (>1840) (VISam1-6)*
 - Posteromedial visual area (>1840) (VISpm)**
 - layers 1-6 (>1840) (VISpm1-6)*
- Cortical subplate (>1840) (CTXsp)
 - Basolateral amygdalar complex (Swanson, 2014)
 - Nucleus of lateral olfactory tract, dorsal cap (see Gurdjian 1928) (NLOT3)**
 - Basomedial amygdalar nucleus (>1840) (BMA)
 - Anterior part (>1840) (BMAa)**

Posterior part (>1840) (BMAp)
 Basolateral amygdalar nucleus (>1840) (BLA)
Anterior part (>1840) (BLAa)
Posterior part (>1840) (BLAp)
Lateral amygdalar nucleus (>1840) (LA)
Posterior amygdalar nucleus (Canteras et al., 1992) (PA)
 Endopiriform nucleus (>1840) (EP)
Ventral part (>1840) (EPv)
Dorsal part (>1840) (EPd)
Clastrum (Burdach, 1822) (CLA)
Layer 6b (>1840) (6b)

Interbrain (Baer, 1837)(IB)

Hypothalamus (Kuhlenbeck, 1927) (HY)

Periventricular hypothalamic zone (Nauta & Haymaker, 1969)

Terminal lamina (Burdach, 1822) (lam)

Vascular organ of lamina terminalis (>1840) (OV)

Median preoptic nucleus (Loo, 1931) (MEPO)

Subfornical organ (Pines, 1927) (SFO)

Anteroventral periventricular nucleus (>1840) (AVPV)

Suprachiasmatic preoptic nucleus (>1840) (PSCH)

Preoptic periventricular nucleus (>1840) (PVpo)

Internuclear area, hypothalamic periventricular part (Swanson, 2004) (I)

Anteroventral preoptic nucleus (>1840) (AVP)

Anterodorsal preoptic nucleus (>1840) (ADP)

Medial preoptic area (>1840) (MPO)

Parastrial nucleus (Simerly et al., 1984)¹⁰ (PS)

Posterodorsal preoptic nucleus (Simerly et al., 1984)¹¹ (PD)

Ventrolateral preoptic nucleus (>1840) (VLP)

Suprachiasmatic nucleus (Spiegel & Zwiig, 1919) (SCH)

dorsomedial region (>1840) (SCHd)

ventrolateral region (>1840) (SCHv)

Subparaventricular zone (Watts & Swanson, 1987) (SBPV)

Periventricular hypothalamic nucleus, anterior part (>1840) (PVa)

Paraventricular hypothalamic nucleus, magnocellular division (>1840) (PVHm)

Anterior magnocellular part (>1840) (PVHam)

Medial magnocellular part (>1840) (PVHmm)

Posterior magnocellular part (>1840) (PVHpm)

medial zone (>1840) (PVHpmm)
lateral zone (>1840) (PVHpml)
 Paraventricular hypothalamic nucleus, parvicellular division (>1840) (PVHp)
 Periventricular part (>1840) (PVHp_{pv})
 Anterior parvicellular part (>1840) (PVHap)
 Medial parvicellular part, dorsal zone (>1840) (PVHmpd)
Anterior hypothalamic area (>1840) (AHA)
Supraoptic nucleus (Lenhossek, 1887) (SOg)
 supraoptic nucleus proper (>1840) (SO)
 retrochiasmatic part (>1840) (SO_r)
Accessory supraoptic group (>1840) (ASO)
 nucleus circularis (>1840) (NC)
 Neurohypophysis (Rioch et al., 1940) ()
 Infundibulum (Rioch et al., 1940) (INF)
 Median eminence (Tilney, 1936) (ME)
 Internal lamina (>1840) (ME_{in})
 External lamina (>1840) (ME_{ex})
 Infundibular stem (Hanström, 1966) (INFS)
 Posterior lobe of pituitary gland (Haller, 1762) (PLP)
Arcuate hypothalamic nucleus (Clark, 1938) (ARH)
Periventricular hypothalamic nucleus, intermediate part (>1840) (PVi)
 Dorsomedial hypothalamic nucleus (>1840) (DMH)
 Anterior part (>1848) (DMHa)
 Posterior part (>1848) (DMHp)
 Ventral part (>1848) (DMHv)
Periventricular hypothalamic nucleus, posterior part (>1848) (PVp)
Posterior hypothalamic nucleus (>1840) (PH)
 Medial hypothalamic zone (Nauta & Haymaker, 1969)
 Medial preoptic nucleus (>1840) (MPN)
 Medial part (>1840) (MPNm)
 Central part (>1840) (MPNc)
 Lateral part (>1840) (MPNl)
 Anterior hypothalamic nucleus (>1840) (AHN)
 Anterior part (>1840) (AHNa)
 Central part (>1840) (AHNc)
 Posterior part (>1840) (AHNp)
 Dorsal part (>1840) (AHNd)

Ventromedial hypothalamic nucleus (>1840) (VMH)

- Anterior part (>1840)** (VMHa)
- Ventrolateral part (>1840)** (VMHvl)
- Central part (>1840)** (VMHc)
- Dorsomedial part (>1840)** (VMHdm)

Ventral premammillary nucleus (>1840) (PMv)

Dorsal premammillary nucleus (>1840) (PMd)

Mammillary body (Ludwig, 1799) (MB)

- Tuberomammillary nucleus (>1840)** (TM)
 - ventral part (Köhler et al., 1985)* (TMv)
 - dorsal part (Köhler et al., 1985)* (TMd)
- Medial mammillary nucleus (Gudden, 1881a)** (MMg)
 - body (>1840)* (MM)
 - median part (>1840)* (MMme)
- Lateral mammillary nucleus (Gudden, 1881a)** (LM)

Supramammillary nucleus (Cajal, xxx) (SUM)

- Medial part (>1840)** (SUMm)
- Lateral part (>1840)** (SUMl)

Lateral hypothalamic zone (Nauta & Haymaker, 1969) (LHZ)

- Lateral preoptic area (>1840)** (LPO)

Lateral hypothalamic area (Nissl, 1913) (LHA)

- Anterior group (Swanson et al., 2005) (LHAag)
 - Retrochiasmatic area (>1840)** (RCH)
 - Anterior region (Swanson et al., 2005)** (LHAa)
 - ventral zone (Swanson et al., 2005)* (LHAav)
 - intermediate zone (Swanson et al., 2005)* (LHAai)
 - dorsal zone (Swanson et al., 2005)* (LHAad)
- Middle group (Swanson et al., 2005) (LHAMg)
 - Medial tier (Swanson et al., 2005) (LHAM)
 - Juxtaventromedial region (Swanson et al., 2005) (LHAjv)
 - Ventral zone (Swanson et al., 2005)** (LHAjvv)
 - Dorsal zone (Swanson et al., 2005)** (LHAjvd)
 - Juxtaparaventricular region (Swanson et al., 2005)** (LHAjp)
 - Juxtadorsomedial region (Swanson et al., 2005)** (LHAjd)
- Perifornical tier (Swanson et al., 2005) (LHApf)
 - Subfornical region (Goto) (LHA sf)
 - Anterior zone (Goto)** (LHA sfa)

Posterior zone (Goto) (LHAsfp)
Premammillary zone (Swanson et al., 2005) (LHAsfpm) **confirm**
Supraforfornical region (>1840) (LHAs)
 Lateral tier (Swanson et al., 2005) (LHA1)
 Tuberal nucleus (>1840) (TU)
Subventromedial part (Swanson et al., 2005) (TUsv)
Intermediate part (Swanson et al., 2005) (TUi)
Terete part (Paxinos & Watson, 19xx) (TUte)
Lateral part (Swanson et al., 2005) (TUl)
 Ventral region (Swanson et al., 2005) (LHA_v)
Medial zone (Swanson et al., 2005) (LHA_{vm})
Lateral zone (Swanson et al., 2005) (LHA_{vl})
Parvicellular region (Swanson et al., 2005) (LHA_{pc})
Magnocellular nucleus (Swanson et al., 2005) (LHA_{ma})
Dorsal region (Swanson et al., 2005) (LHA_d)
 Posterior group (Swanson et al., 2005) (LHA_p)
Posterior region (Swanson et al., 2005) (LHA_p)
Preparasubthalamic nucleus (Swanson, 2004) (PST)
Parasubthalamic nucleus (Wang & Zhang, 1995) (PSTN)
Subthalamic nucleus (>1840) (STN)

Retina (Herophilus, 335-263 BC) (R)
ganglion cell layer (>1840) (Rgcl)
inner plexiform layer (>1840) (Ripl)
inner nuclear layer (>1840) (Rinl)
outer plexiform layer (>1840) (Ropl)
outer nuclear layer (>1840) (Ronl)

Thalamus (His, 1893a) (TH)
 Ventral part of thalamus (Herrick, 1910) (VNT)
 Zona incerta, general (Forel, 1877) (ZIg)
Zona incerta (>1840) (ZI)
dopaminergic group (>1840) (ZI_{da})
Fields of Forel (>1840) (FF)
Ventral lateral geniculate nucleus (>1840) (LG_v)
medial zone (>1840) (LG_{vm})
lateral zone (>1840) (LG_{vl})
Intergeniculate leaflet (>1840) (IGL)
Reticular thalamic nucleus (>1840) (RT)

Dorsal part of thalamus (Herrick, 1910) (DOR)

Midline thalamic nuclei (>1840) (MTN)

Nucleus reuniens (Malone, 1910) (RE)

Rostral division (Risold et al., 1997) (REr)

anterior part (Risold et al., 1997) (REa)

dorsal part (Risold et al., 1997) (REd)

ventral part (Risold et al., 1997) (REv)

lateral part (Risold et al., 1997) (REl)

median part (Risold et al., 1997) (REm)

Caudal division (Risold et al., 1997) (REca)

caudal part (Risold et al., 1997) (REc)

dorsal part (Risold et al., 1997) (REcd)

median part (Risold et al., 1997) (REcm)

Paraventricular thalamic nucleus (>1840) (PVT)

Paratenial nucleus (>1840) (PT)

Anterior thalamic nuclei (>1840) (ATN)

Anteroventral thalamic nucleus (>1840) (AV)

Anterodorsal thalamic nucleus (>1840) (AD)

Anteromedial thalamic nucleus (>1840) (AM)

Ventral part (Canteras & Swanson, 1992a) (AMv)

Dorsal part (Canteras & Swanson, 1992a) (AMd)

Interanteromedial thalamic nucleus (>1840) (IAM)

Interanterodorsal thalamic nucleus (>1840) (IAD)

Lateral dorsal thalamic nucleus (>1840) (LD)

Intralaminar thalamic nuclei (>1840) (ILM)

Rhomboid nucleus (Cajal, 1904) (RH)

Central medial thalamic nucleus (Rioch, 1928) (CM)

Paracentral thalamic nucleus (Gurdjian, 1927) (PCN)

Central lateral thalamic nucleus (Rioch, 1928) (CL)

Parafascicular nucleus (Vogt, 1909) (PF)

Medial thalamic nuclei (>1840) (MED)

Perireuniens nucleus (Brittain, 1988) (PR)

Submedial thalamic nucleus (>1840) (SMT)

Mediodorsal thalamic nucleus (>1840) (MD) [98]

Medial part (>1840) (MDm)

Central part (>1840) (MDc)

Lateral part (>1840) (MDl)

Intermediodorsal thalamic nucleus (>1840) (IMD)
 Ventral thalamic nuclei (>1840)
 Ventral anterior-lateral thalamic complex (Sawyer et al., 1979) (VAL)
 Ventral medial thalamic nucleus (>1840) (VM)
 Ventral posterior thalamic nucleus (>1840) (VP)
 Ventral posteromedial thalamic nucleus, general (Clark, 1930) (VPMg)
 Principal part (>1840) (VPM)
 Parvicellular part (>1840) (VPMpc)
 Ventral posterolateral thalamic nucleus, general (Clark, 1930) (VPLg)
 Principal part (>1840) (VPL)
 Parvicellular part (>1840) (VPLpc)
 Subparafascicular nucleus (>1840) (SPF)
 Magnocellular part (>1840) (SPFm)
 Parvicellular part (>1840) (SPFp)
 Medial division (>1840) (SPFpm)
 Lateral division (>1840) (SPFpl)
 Peripeduncular nucleus (>1840) (PP)
 Lateral thalamic nuclei (>1840) (LAT)
 Lateral posterior thalamic nucleus (>1840) (LP)
 Posterior thalamic nuclei (>1840) (POT)
 Posterior thalamic [complex] nucleus (>1840) (PO)
 Supragenulate nucleus (>1840) (SGN)
 [Posterior] Limiting thalamic nucleus (>1840) (POL)
 Medial geniculate complex (>1840) (MG)
 Medial part (>1840) (MGm)
 Ventral part (>1840) (MGv)
 Dorsal part (>1840) (MGd)
 Dorsal lateral geniculate nucleus (>1840) (LGd)
 Epithalamus (His, 1893b) (EPI)
 Habenular nuclei (>1840) (H)
 Medial habenula (>1840) (MH)
 dorsal part (>1840) (MHd)
 ventral part (>1840) (MHv)
 Lateral habenula (>1840) (LH)
 Pineal gland (Galen, c192) (PIN)
 Midbrain (Baer, 1837) (MB)
 Tegmentum (Swanson, 2000b) (TG)

Oculomotor nucleus (>1840) (III)
Trochlear nucleus (>1840) (IV)
Medial accessory oculomotor nucleus (Bechterew?) (MAN)
Edinger-Westphal nucleus (>1840) (EW)
Nucleus of Darkschewitsch (>1840) (ND) non eponym??
Interstitial nucleus (>1840) (INC) see Dorland/Mettler for dropping Cajal
Medial terminal nucleus of accessory optic tract (?Edinger, xxxx) (MT)
Lateral terminal nucleus of accessory optic tract (>1840) (LT)
Dorsal terminal nucleus of accessory optic tract (>1840) (DT)
Rostral linear raphe nucleus (>1840) (RL)
Interfascicular raphe nucleus (>1840) (IF)
Interpeduncular nucleus (Gudden, 18xx) (IPN)
rostral subnucleus (>1840) (IPNr)
apical subnucleus (>1840) (IPNa)
dorsomedial subnucleus (>1840) (IPNd)
lateral subnucleus (>1840) (IPNl)
intermediate subnucleus (>1840) (IPNi)
central subnucleus (>1840) (IPNc)
Central linear raphe nucleus (>1840) (CLI)
Superior central raphe nucleus (>1840) (CS) or Median raphe nucleus (19xx)
medial part (>1840) (CSm)
lateral part (>1840) (CSl)
Dorsal raphe nucleus (>1840) (DR)
 Substantia nigra (Soemmerring, 1791) (SN)
 Reticular part (Sano, 1910) (SNr)
 Compact part (Sano, 1910) (SNc)
Ventral tegmental area (Tsai, 1925) (VTA)
Red nucleus (Burdach, 1822) (RN)
Anterior tegmental nucleus (Paxinos & Butcher, 1985) (AT)
 Midbrain reticular nucleus (>1840) (MRN)
 Magnocellular part (>1840) (MRNm)
 Parvicellular part (>1840) (MRNp)
 Retrorubral area (>1840) (RR)
 Periaqueductal gray (>1840) (PAG)
 Precommissural nucleus (Paxinos & Watson, 1986 check edn.) (PRC)
 Commissural nucleus (Swanson, 1998) (COM)
 Rostromedial division (Swanson, 1998) (PAGrm)

Rostrolateral division (Swanson, 1998) (PAGrl)
Medial division (Beitz, 1985) (PAGm)
Ventrolateral division (Beitz, 1985 double check) (PAGvl)
Dorsolateral division (Beitz, 1985) (PAGdl)
Dorsal division (Beitz, 1985) (PAGd)
Cuneiform nucleus (Castaldi, 192x) (CUN)
 Pretectal region (Edinger, xxxx) (PRT)

- Olivary pretectal nucleus (>1840)** (OP)
- Nucleus of the optic tract (>1840)** (NOT)
- Posterior pretectal nucleus (>1840)** (PPT)
- Nucleus of posterior commissure (>1840)** (NPC)
- Anterior pretectal nucleus (>1840)** (APN)
- Medial pretectal area (>1840)** (MPT)

Midbrain nucleus of trigeminal nerve (>1840) (MEV)
Nucleus sagulum (>1840) (SAG)
Parabigeminal nucleus (Bechterew, xxxx) (PBG)
Nucleus of brachium of inferior colliculus (>1840) (NB)
 Tectum (Baer, 1837) (TC)

- Superior colliculus (Haller, 1762)** (SC)
 - zonal layer (>1840)* (SCzo)
 - superficial gray layer (>1840)* (SCsg)
 - sublayer a of intermediate gray layer (>1840)* (SCig.a)
 - sublayer b of intermediate gray layer (>1840)* (SCig.b)
 - sublayer c of intermediate gray layer (>1840)* (SCig.c)
 - deep gray layer (>1840)* (SCdg)

 Inferior colliculus (Haller, 1762) (IC)

- Central nucleus (>1840)** (ICc)
- Dorsal nucleus (>1840)** (ICd)
- External nucleus (>1840)** (ICe)

 Rhombic brain (His, 1893b) (RB)

- Hindbrain (Baer, 1837) (HB)
 - Pons (Haller, 1747) (P)
 - Abducens nucleus (>1840)** (VI)
 - Accessory abducens nucleus (>1840)** (ACVI)
 - Motor nucleus of trigeminal nerve (>1840) (V)
 - Magnocellular part (>1840)** (Vma)

Parvicellular part (>1840) (Vpc)
Efferent vestibular nucleus (>1840) (EV)
 Pontine nuclei, general (>1840) (PGg)
 Pontine nuclei (Jacobsohn, 1909) (PG)
 Tegmental reticular nucleus (>1840) (TRN)
Magnus raphe nucleus (>1840)¹² (RM)
Pontine raphe nucleus (>1840) (RPO)
 Pontine reticular nucleus (>1840) (PRN)
 Rostral part (>1840) (PRNr)
 Caudal part (>1840) (PRNc)
Pedunculopontine nucleus (>1840) (PPN)
Supratrigeminal nucleus (>1840) (SUT)
Ventral tegmental nucleus (>1840) (VTN)
 Pontine central gray, general (>1840) (PCGg)
 Pontine central gray (>1840) (PCG)
 Nucleus incertus (Streeter, 1903) (NI)
 compact part (Goto et al., 2001) (NIc)
 diffuse part (Goto et al., 2001) (NI_d)
Lateral tegmental nucleus (Swanson, 1998) (LTN)
Dorsal tegmental nucleus (>1840) (DTN)
Sublaterodorsal nucleus (>1840) (SLD)
Laterodorsal tegmental nucleus (>1840) (LDT)
Barrington's nucleus (>1840) (B) non-eponym?
Subceruleus nucleus (Meessen & Olszewski, 1949) (SLC) they added alpha
Locus ceruleus (Wenzel & Wenzel, 1812) (LC)
Supragenual nucleus (Meessen & Olszewski, 1949) (SG)
 Parabrachial nucleus (>1840) (PB)
 Medial division (>1840) (PBm)
 Ventral medial part (Swanson, 1992) (PBmv)
 Medial medial part (>1840) (PBmm)
 External medial part (>1840) (PBme)
 Kölliker-Fuse subnucleus (>1840) (KF) non-eponym?
 Lateral division (>1840) (PBl)
 Ventral lateral part (>1840) (PBlv)
 Internal lateral part (>1840) (Pbli)
 Central lateral part (>1840) (PBlc)
 External lateral part (>1840) (PBLE)

- Extreme lateral part (>1840)** (PBlex)
- Superior lateral part (>1840)** (PBls)
- Dorsal lateral part (>1840)** (PBld)
- Principal sensory nucleus of trigeminal nerve (>1840)** (PSV)
- Nucleus of lateral lemniscus (>1840)** (NLL)
 - dorsal part (>1840)* (NLLd)
 - horizontal part (>1840)* (NLLh)
 - ventral part (>1840)* (NLLv)
- Superior olivary complex (>1840)** (SOC) in NT15 medulla (but pons in TA98)
 - medial part (>1840)* (SOCm)
 - lateral part (>1840)* (SOCl)
 - periolivary region (>1840)* (POR)
- Nucleus of trapezoid body (>1840)** (NTB)
- Superior vestibular nucleus (>1840)** (SUV)
- Lateral vestibular nucleus (>1840)** (LAV)
- Nucleus y (>1840)** (y)
- Infracerebellar nucleus (>1840)** (ICB)
- Cerebellum (Aristotle) (CB)
 - Cerebellar nuclei (>1840) (CBN)
 - Fastigial Nucleus (>1840)** (FN)
 - Interposed Nucleus (>1840) (IP)
 - Main part (>1840)** (IPm)
 - Parvicellular part (>1840)** (IPp)
 - Dentate Nucleus (>1840) (DN)
 - Magnocellular part (>1840)** (DNm)
 - Parvicellular part (>1840)** (DNp)
 - Cerebellar cortex (Willis, 1664) (CBX)
 - Cerebellar vermis (Meckel, 1817) (VERM)
 - Lingula (Malacarne, 1776)** (LING) or **Lobule I (>1840)**
 - Central lobule (Burdach, 1822)** (CENT)
 - sublobule a of lobule II (>1840)* (CENT2a)
 - sublobule bs of lobule II (>1840)* (CENT2bs)
 - sublobule a of lobule III (>1840)* (CENT3a)
 - sublobule bs of lobule III (>1840)* (CENT3bs)
 - Culmen (Stroud, 1895)** (CUL) or **Lobules IV, V (>1840)**
 - lobules IV, V (>1840)* (CUL4,5)
 - Declive (>1840)** (DEC) or **Lobule VI (>1840)**

sublobules a-d (>1840) (DECa-d)

Folium-tuber vermis (>1840) (FOTU) or Lobule VII (>1840)

Pyramis (Malacarne, 1776) (PYR) or Lobule VIII (>1840)

sublobules a,b (>1840) (PYRa,b)

Uvula (Malacarne, 1776) (UVU) or Lobule IX (>1840)

sublobules ab,c (>1840) (UVUab,c)

Nodule (Reil, 1807-1808a) (NOD) or Lobule X (>1840)

sublobules a,b (>1840) (NODa,b)

Cerebellar hemisphere (Willis, 1664) (HEM)

Simple lobule (Jansen & Brodal, 1954) (SIM)

Ansiform lobule (Bolk, 1906) (AN)

Ansiform lobule crus 1 (Bolk, 1906) (ANcr1)

sublobules a-d (>1840) (ANcr1a-d)

Ansiform lobule crus 2 (Bolk, 1906) (ANcr2)

sublobules a-d (>1840) (ANcr1a-d)

sublobules a,b (>1840) (ANcr1a,b)

Gracile lobule (>1840) STRAIGHTEN OUT (NT14)

Biventral lobule (>1840)

Tonsil (Malacarne, 1776)

Paraflocculus (Stroud, 1895) (PFL)

Flocculus (Meckel, 1817)

Paramedian lobule (PRM) STRAIGHTEN OUT BM3

Copula pyramidis (COPY)

sublobules a,b (COPYa,b)

Paraflocculus (PFL)

Flocculus (FL)

Afterbrain (Baer, 1837) (AFB) or Medulla (Winslow, 1733) (MY)

Facial nucleus (>1840) (VII)

Accessory facial nucleus (>1840) (ACVII)

Hypoglossal nucleus (>1840) (XII)

Ambiguous nucleus, dorsal division (>1840) (AMBd)

Superior salivatory nucleus (>1840) (SSN)¹³

Inferior salivatory nucleus (>1840) (ISN)

Ambiguous nucleus, ventral division (>1840) (AMBv)

Dorsal motor nucleus of vagus nerve (>1840) (DMX)

Efferent cochlear group (>1840) (ECO)

Pallidal raphe nucleus (>1840) (RPA) TA98 for English
Obscurus raphe nucleus (>1840) (RO) TA98 for English
 Paragigantocellular reticular nucleus (>1840) (PGRN)
 Lateral part (>1840) (PGRNI)
 Dorsal part (>1840) (PGRNd)
Magnocellular reticular nucleus (>1840) (MARN)
Gigantocellular reticular nucleus (>1840) (GRN)
Parvicellular reticular nucleus (>1840) (PARN)
Parapyramidal nucleus (>1840) (PPY) location in list & on flatmap?
 deep part (>1840) (PPYd)
 superficial part (>1840) (PPYs)
 Medullary reticular nucleus (>1840) (MDRN)
 Ventral part (>1840) (MDRNv)
 Dorsal part (>1840) (MDRNd)
 Inferior olivary complex (>1840) (IO)
 Medial accessory olive (>1840) (IOma)
 Principal olive (>1840) (IOpr)
 Dorsal accessory olive (>1840) (IOda)
 Lateral reticular nucleus (LRN)
 Magnocellular part (>1840) (LRNm)
 Parvicellular part (>1840) (LRNp)
Linear medullary nucleus (>1840) (LIN)
Paramedian reticular nucleus (>1840) (PMR)
Parasolitary nucleus (>1840) (PAS)
 Cochlear nuclei (>1840) (CN)
 Ventral cochlear nucleus (>1840) (VCO)
 Anterior part (>1840) (VCOa)
 Posterior part (>1840) (VCOp)
 Dorsal cochlear nucleus (>1840) (DCO)
 Subpeduncular granular region (>1840) (CNspg)
 Granular lamina (>1840) (CNlam)
 Interstitial nucleus of auditory nerve (>1840) (IAN)
Medial vestibular nucleus (>1840) (MV)
Spinal vestibular nucleus (>1840) (SPIV)
 Perihypoglossal nuclei (>1840) (PHY)
 Nucleus intercalatus (>1840) (NIS)
 Nucleus prepositus (>1840) (PRP)

Nucleus of Roller (>1840) (NR) **non eponym?**

Interstitial nucleus of vestibular nerve (>1840) (INV)

Nucleus x (>1840) (x)

Nucleus of solitary tract (>1840) (NTS)

 Medial part (>1840) (NTSm)

Rostral zone (>1840) (NTSmr)

Caudal zone (>1840) (NTSmc)

Central part (>1840) (NTSce)

Gelatinous part (>1840) (NTSge)

Lateral part (>1840) (NTSl)

Commissural part (>1840) (NTSco)

Area postrema (>1840) (AP)

Dorsal column nuclei (>1840) (DCN)

Gracile nucleus, general (>1840) (GRg)

gracile nucleus, principal part (>1840) (GR)

median part (>1840) (GRm)

Nucleus z (>1840) (z)

Cuneate nucleus (>1840) (CU)

Accessory cuneate nucleus (>1840)¹⁴ (ACU)

Paratrigeminal nucleus (>1840) (PAT)

Spinal nucleus of trigeminal nerve (>1840) (SPV)

Oral part (>1840) (SPVO)

ventrolateral part (>1840) (SPVOvl)

rostral dorsomedial part (>1840) (SPVOrdm)

middle dorsomedial part, dorsal zone (>1840) (SPVOMdmd)

middle dorsomedial part, ventral zone (>1840) (SPVOMdmv)

caudal dorsomedial part (>1840) (SPVOcdm)

Interpolar part (>1840) (SPVI)

Caudal part (>1840) (SPVC)

Spinal cord (Galen, c162-c166) (SP)

 Ventral horn (>1840)

Nucleus of spinal accessory nerve (>1840) (XI)

 Ventral horn of spinal cord, general (>1840) (VHg)

ventral horn of spinal cord (>1840) (VH)

nucleus of bulbocavernosus (>1840) (NBC)

Onuf's nucleus (>1840) (ON) non eponym?

phrenic nucleus (>1840) (PN)

Intermediate gray of spinal cord, general [IHg]

Spinal central gray (>1840) (CGS)

Intermediomedial column (>1840) (IMM)

Dorsal commissural nucleus (>1840) (DOC)

Intermediate gray of spinal cord proper (>1840) (IH) better abbreviation?

Intercalated spinal nucleus (>1840) (ICS)

Central cervical nucleus (>1840) (CEC)

Dorsal thoracic nucleus (>1840) (DSN) old: dorsal nucleus of the spinal cord, rostral part (DSN) [137]

Dorsal thoracic nucleus, caudal part (>1840) (DSNc) Stilling's nucleus; see Snyder 78; "caudal homologue of Clarke's nucleus" Chang 1951 [not in Snyder 78, Edgley91, Matsushita79r&c,]

Intermediolateral column, thoracolumbar division (>1840) (IMLs)

Intermediolateral column, sacral division (>1840) (IMLp)

Dorsal horn (>1840) (DH)

Basal nucleus of dorsal horn, general (>1840) (BNg)

Basal nucleus of dorsal horn (>1840) (BN)

Lateral cervical nucleus (>1840) (LCN)

Lateral spinal nucleus (>1840) (LSN)

Nucleus proprius of spinal cord (>1840) (NP)

Spinal reticular nucleus (>1840) (RS) name update

Substantia gelatinosa of spinal cord (>1840) (SGE)

Marginal zone of spinal cord (>1840) (MZ)

¹ *Innominate* and BSTdm paper in JCN *substance (Schwalbe, 1881)*, the English form of *substantia innominata (Schwalbe, 1881)*, was sanctioned by the *Terminologia Anatomica* (1998, p. 129).

² The parcellation used here is based on the cellular architectonic work of Ju & Swanson (1989) and Ju et al. (1989) in adult rat, as modified by connectional data; see Swanson (2004, p. 170, note 65), Dong & Swanson (2006 BSTam paper in JCN and BSTdm paper in JCN). Also see Bota et al. (2012 BR1450:174-193).

³ It was defined in adult rat based on cellular architecture and connections by Dong & Swanson (2006 [BSTam paper in JCN], pp. 145-146), and is a simplification of the original BST parcellation scheme proposed by Ju & Swanson (1989), and modified by Dong et al. (2001 [AMY-BST paper]).

⁴ It was originally identified based on cellular architecture in adult rat by Ju & Swanson (1989, p. 593). Based on further cellular architecture analysis and on connectional data, its borders were later refined by Dong & Swanson, 2006 [BSTdm paper in JCN], p. 79). First, the rostral tongue of the original BSTdm was assigned to the BSTam, and second, the caudal end of the original BSTdl (Ju & Swanson, 1989) was assigned to the BSTdm.

⁵ It was originally identified based on cellular architecture in adult rat by Ju & Swanson (1989, p. 593). Its extent was further clarified by Dong & Swanson (2004b [BSTal paper in JCN], p. 283), and based on connectional evidence, Dong & Swanson merged the bed nuclei stria terminalis, anterior division,

subcommissural zone (BSTsc; of Ju & Swanson, 1989) with it, eliminating the BSTsc (reported in Swanson, 2004, note 65).

⁶ Named in adult rat by McDonald (1983).

⁷ Named thus in adult rat based on cellular architecture by Ju & Swanson (1989, p. 596). The caudal tip (Atlas Level 23) of the rat BSTpr as originally defined by Ju & Swanson (1989) was assigned to the BSTif by Dong & Swanson based on connectional data; reported in Swanson (2004, p. 170, note 65).

⁸ Named thus in adult rat based on cellular architecture by Ju & Swanson (1989, p. 596). The caudal tip (Atlas Level 23) of the rat BSTpr as originally defined by Ju & Swanson (1989) was assigned to the BSTif by Dong & Swanson based on connectional data; reported in Swanson (2004, p. 170, note 65).

⁹ First named such by Cajal (1909-1911, Volume 2, Fig. 504e) in the newborn mouse with the Golgi method.

¹⁰ Named in adult rat, based on cellular architecture and connections, by Simerly et al. (1984).

¹¹ Check Simerly et al. (1984)—may have been simply called posterodorsal nucleus.

¹² **Magnus raphe nucleus (>1840)**, the English form of *nucleus raphe magnus (>1840)*, was sanctioned by the *Terminologia Anatomica* (1998, p. 129).

¹³ See Ten Tusscher et al. (1990, p. 319). update atlas?

¹⁴ It was called the external cuneate nucleus (ECU) in Swanson (2004).