

C. Gross Anatomical Features of the Rat CNS

BASIC SUBDIVISIONS [1]

Central Nervous System (CNS)

Brain (BR)

Forebrain (FB)

Telencephalon (TL)

cerebral cortex (CTX)

cingulate region (CNG)

frontal region (FRO)

hippocampal formation (HPF)

insular region (INS)

occipital region (OCC)

parietal region (PTL)

prefrontal region (PFR)

rhinal region (RHI)

temporal region (TE)

basal ganglia (BG)

amygdala (AMY)

corpus striatum (CSTR)

striatum (STR)

pallidum (PAL)

septal region (SEP)

Diencephalon (DI)

thalamus (TH)

epithalamus (EPI)

dorsal thalamus (DOR)

anterior thalamic nuclei (ATN)

geniculate nuclei (GEN)

intralaminar nuclei (ILM)

lateral thalamic nuclei (LAT)

medial thalamic nuclei (MED)

midline thalamic nuclei (MID)

ventral thalamic nuclei (VENT)

ventral thalamus (VNT)

Hypothalamus (HY)

periventricular zone (PVZ)

medial zone (MEZ)

preoptic level, hypothalamus (PRO)

anterior level, hypothalamus (ANT)

tuberal level, hypothalamus (TUB)

mammillary level, hypothalamus (MAM)

lateral zone (LZ)

Midbrain (MB)

Tectum (TC)

Tegmentum (TG)

Pretectal region (PRT)

Hindbrain (HB)

Isthmus (IS)

Pons (P)

Cerebellum (CB)

cerebellar cortex (CBX)

anterior lobe (ALC)

posterior lobe (PLC)

flocculonodular lobe (FNL)

deep cerebellar nuclei (DNC)

Medulla (MY)

Spinal Cord (SP)

Cervical level, segments 1-8 (SP-C1-8)

Thoracic level, segments 1-13 (SP-T1-13)

Lumbar level, segments 1-6 (SP-L1-6)

Sacral level, segments 1-4 (SP-S1-4)

Coccygeal level, segments 1-3 (SP-Co1-3)

EMBRYOLOGICAL FEATURES [2]

amnion (cut edge) (AMN)

brain plate (BRP)

ectoderm (ECD)

endoderm (END)

Hensen's node (Hn)

lateral ventricular ridge (VRL)

medial ventricular ridge (VRm)

mesoderm (MES)

neural crest (NCR)

neural plate (NPL)

neural tube (NT)

pallium (PALL)

primary ventricular ridge (VRp)

rhombic lip (RHL)

somatic ectoderm (SE)

spinal plate (SPP)

synencephalon (SY)

olfactory placode (olp)

trigeminal placode (Vpla)

facial placode (VIIp)

otic placode (otp)

distal glossopharyngeovagal placode (IX/Xpd)

proximal glossopharyngeovagal placode (IX/Xpp)

alar plate (ALP)

anterolateral ridge (alr)

basal plate (BAP)

cardiogenic region (cr)

cervical flexure (cf)

di-telencephalic roof plate (dtrp)

diencephalic roof plate (drp)

floor plate (fpl)

hindbrain roof plate (hrp)

hippocampal primordium (php)

hypophyseal placode (hp)

hypothalamic sulcus (shy)

infundibular sulcus (sin)

intrastratial sulcus (sis)

lamina terminalis (lam)

lateral striatal sulcus (ssl)

lens placode (lep)

medial striatal sulcus (ssm)

neural groove (ng)

notochord (nch)
optic sulcus (sopt)
optic vesicle primordium (ovp)
oropharyngeal membrane (opm)
primitive streak (prs)
roof plate (rpl)
rostral neuropore (rnp)
sulcus limitans (sl)
sulcus medullaris (sme)
sulcus terminalis (ste)
sulcus ventralis (sve)
telencephalic roof plate (trp)
torus hemisphericus (the)
torus transversus (ttr)
velum transversum (vtr)

GROOVES

Cerebral cortex

endorhinal groove (eg) [3]
hippocampal fissure (hf)
rhinal fissure (rf)
rhinal insisure (ri) [4]

Cerebellar cortex [5]

precentral fissure (pce)
precentral fissure a (pcea)
precentral fissure b (pceb)*
intracentral fissure 2 (ice2)
caudal intracentral fissure (icec)*

preculminate fissure (pcf)
intraculminate fissure 1 (icu1)
posterodorsal intraculminate fissure (icupd)*
primary fissure (pri)
declival fissure 2 (def2)
posterior superior fissure (psf)
prepyramidal fissure (ppf)
pyramidal fissure (pyf)*
secondary fissure (sec)
uvular fissure 1 (uf1)
posterolateral fissure (plf)
nodular fissure (nf)*
simple fissure (sif)*
crus 1 fissures 1-3 (cr1f1-3)
intercrural fissure (icf)
crus 2 fissure (cr2f)*
ansoparamedian fissure (apf)
intraparafloccular fissure (ipf)
paramedian sulcus (pms)
parafloccular sulcus (pfs)

GLANDS

pineal gland (PIN) [6]
 pineal stalk (PIS)
pituitary gland (PIT) [7]
 median eminence (ME)
 external lamina (MEex)
 internal lamina (MEin)

infundibulum (INF)

external lamina (INFex)

internal lamina (INFin)

anterior lobe (AL)

intermediate lobe (IL)

neural lobe (NL)

VENTRICULAR SYSTEM (VS)

lateral ventricle (VL)

rhinocele (RC) [8]

subependymal zone (SEZ) [9]

interventricular Foramen (IVF)

third ventricle (V3)

preoptic recess (V3p)

periventricular recess (V3r) [10]

infundibular recess (V3ir)

mammillary recess (V3m)

cerebral aqueduct (AQ)

collicular recess (AQc)

subcommissural organ (SCO) [11]

fourth ventricle (V4)

median aperture (MAP)

lateral aperture (LAP)

lateral recess (V4r)

rostral medullary velum (RMVE) [12]

caudal medullary vellum (CMVE) [13]

central canal (C)

choroid plexus (chp)

choroidal fissure (chf)

velum interpositum (VIP)

MISCELLANEOUS

central gray (CG)

cerebellar cortex, hemisphere (CBXh)

cerebellar cortex, vermis (CBXv)

frontal pole (FRP)

hemispheric region, telencephalon (HEMR)

limbic region, telencephalon (LIM)

occipital pole (OCP)

temporal pole (TEP)

Gross Anatomical Features of the Rat CNS (Footnote Annotations)

- 1 See Figs. 1-6.
- 2 See Figs. 1-6.
- 3 Craigie 1925.
- 4 Craigie 1925.
- 5 Larsell 1952, 1970; Voogd et al. 1985. We have named several fissures, indicated by an asterisk (*), not named in the aforementioned works.
- 6 Ariens-Käppers 1960.
- 7 Schwind 1928; Daniel and Prichard 1975; Hebel and Stromberg 1986.
- 8 The obliterated olfactory extension of the lateral ventricle (Craigie 1925).
- 9 Privat and Leblond 1972; Bayer et al. 1991.
- 10 D.A. Brittain and L.W. Swanson (personal observations).
- 11 Wislocki and Leduc 1954.
- 12 Voogd et al. 1985.
- 13 Voogd et al. 1985.