**Supplemental Table 3: Glossary of Terms**

1. ***Adenohypophysis:*** The rostral portion of the pituitary gland (**Figure 13**). This structure regulates several physiological processes including stress, growth, reproduction, and lactation. Also referred to as the “pars distalis.”
2. ***Age-matched:***A control group that is defined by having been conceived on the same embryonic day as the treatment group.
3. ***Alar plate:*** The region of the [neural tube](https://en.wikipedia.org/wiki/Neural_tube) dorsal to the sulcus limitans. Cells from this plate become afferent (sensory) neurons and form the dorsal horn of the spinal cord.
4. ***Amygdaloid body:*** Also called the amygdaloid nucleus. A small, oval structure in the temporal lobe of the brain that is closely connected to the hypothalamus, the hippocampus, and the cingulate gyrus. The amygdaloid nucleus is part of the olfactory and limbic systems and plays a role in the sense of smell, motivation, and emotional behavior.
5. ***Anencephaly:*** A severe congenital malformation characterized by absence of the telencephalon, or cerebral hemispheres, and overlying skull (**Figure 27**). This gross lesion is the most common neural tube defect in humans but is infrequent in mice.
6. ***Anlage:*** A rudimentary clustering of embryonic cells that will be the locus from which a particular structure is derived. (Pleural form = anlagen; synonym = primordium)
7. ***Apoptosis:*** The death of neural cells that occurs normally as a controlled part of an organism's growth or development.
8. ***Astrocyte:*** Star-shaped glial cell in both brain and spinal cord that have various functions such as supporting neurons and forming the blood-brain barrier and lymphatic channels. A synonym is astroglial cell (pleural = astroglia).
9. ***Basal lamina:*** A layer of the basement membrane adjacent to the basal surface of the adjoining cell layer and composed of lamina densa and lamina lucida.
10. ***Basal nuclei:*** Large, bilaterally symmetrical collections of neurons at the base of the brain (caudate nucleus, putamen, and globus pallidus) that are primarily responsible for regulating movement. An alternate term for these domains is **basal ganglia**.
11. ***Basal plate:*** The region of the neural tube ventral to the sulcus limitans. Cells from this plate become efferent (motor) neurons and form the ventral horn of the spinal cord.
12. ***Brain vesicles:*** Divisions of the developing embryonic brain that are delineated by incomplete transverse constrictions (indentations) of the neural tube (**Figure 2**). The three primary vesicles are the prosencphalon (forebrain), mesencephalon (midbrain), and rhombencephalon (hindbrain). The five secondary vesicles are the telencephalon (cerebral hemispheres); diencephalon (epithalamus, thalamus, and hypothalamus); mesencephalon (midbrain), metencephalon (cerebellum and pons); and myelencephalon (medulla oblongata).
13. ***Branchial arches:*** Six arches in the embryo that appear transiently and give rise to specialized structures in the head and neck.
14. ***Caudal commissure:*** A rounded band of white fibers crossing the midline immediately dorsal to the mesencephalic (cerebral) aqueduct, where the aqueduct becomes continuous with the third ventricle.
15. ***Cephalization:*** The trend in nervous system evolution for the concentration of sensory and neural organs to be positioned towards the head.
16. ***Cerebellar foliation:*** The basic morphologic pattern of the cerebellum, where folia (thin leaves) are separated by fissures. The cortex of a single folium consists of three layers: superficial molecular layer, intermediate Purkinje cell layer, and deep granule cell layer. This cortex covers the deeper white matter (interconnecting fibers). An external granule cell layer forms a transient superficial sheet of stem cells during cerebellar development, which in mice regresses after birth as the cells migrate to the granule cell layer.
17. ***Cerebellar lobules:*** Grossly, the cerebellum is divided into two hemispheres, separated by a narrow midline zone (vermis). A set of large fissures divides the overall structure into smaller rostral and caudal lobes and lobules.
18. ***Cerebral cortex:*** The outer layer of the cerebrum, composed of folded gray matter.
19. ***Cervical intumescence:***Enlargement of the cervical spinal cord (at C4 to T2) due to expansion of the ventral horns (housing the motor neurons that supply nerves to the forelimbs).
20. ***Choroid plexus:*** A network of blood vessels and specialized ependymal cells in each ventricle, derived from the pia mater, that produces cerebrospinal fluid (CSF).
21. ***Circumventricular organs:*** Seven small regions adjacent to the ventricular system that have fenestrated capillaries and lack a blood-brain barrier. The seven areas are the neurohypophysis (defined below), subfornical organ, subcommissural organ, median eminence, area postrema, pineal gland, and the organum vasculosum.
22. ***Coronal sections:*** Tissue slices acquired in a cranial-to-caudal manner, yielding a cross-sectional orientation for the brain. The embryo is positioned in the mold with the most rostral aspect of its head (i.e., the nose) touching the base of the mold. This orientation is the classic position for evaluation of the brain.
23. ***Corpus callosum:*** An arched mass of white matter within the longitudinal fissure, composed of transverse fibers connecting the two cerebral hemispheres. Allows communication between the left and right sides of the brain.
24. ***Craniorachischisis:*** Neural tube defect where both the brain and spinal cord remain open dorsally. Both anencephaly/exencephaly and spina bifida are present.
25. ***Cribriform plate:*** The horizontal plate of the ethmoid bone that supports the olfactory bulb and is perforated to allow passage of the olfactory nerve (cranial nerve I) fibers.
26. ***Deep cerebellar nuclei:*** Three large, deep, bilaterally symmetrical collections of neurons (medial, interposed, and lateral) embedded in the central white matter. These nuclei receive both inhibitory (GABAergic) inputs and excitatory (glutamatergic) inputs.
27. ***Dendritic arborization:*** A process by which neurons form extensive new “trees” of elaborate processes with elaborate branches to form new synaptic connections. Dendrites are the processes that receive information from other cells. Also known as dendritic branching.
28. ***Dentate gyrus:*** A simple cortical region that is an integral part of the hippocampal formation. It runs from the septal nuclei rostrally to the temporal cortex caudally. It is composed of a molecular layer, a granule cell layer, and a polymorphic cell layer.
29. ***Diencephalon:*** The caudal portion of the forebrain composed of the epithalamus, thalamus, hypothalamus and subthalamus (**Figure 2**). Develops from the foremost cerebral vesicle.
30. ***Ectoderm:*** The outer layer of the embryo in early development.
31. ***Embryo:***By common usage, all prenatal stages of murine development between fertilization and birth. [NOTE: In technical terms, embryos are the prenatal stages of gestation during which organogenesis (defined below) is occurring (up to just before E15 in the mouse), while prenatal stages after organogenesis are considered to be a fetus (E15 to birth in the mouse. Since the mouse has a much shorter gestation period than humans, the designation of “embryo” versus “fetus” is less important, whereas the developmental age post-conception is critically important. For this reason, the term “embryo” is used to define all stages of murine development between fertilization and birth with the stage of development indicated by the gestational age).
32. ***Embryonic age:***Gestational age of an embryo, with the moment of conception defined as E0 and the morning on which the vaginal plug is observed designated as E0.5.
33. ***Embryonic stage:***Gestational age of an embryo as defined by the presence of particular anatomic features.
34. ***Embryonic axis:***The cranial-caudal central axis established in the embryo by the primitive streak.
35. ***Encephalocele:*** A small neural tube closure defect, typically observed on the midline, in which a small opening in the skull permits protrusion of a small amount of brain. These lesions may be bare, covered by meninges, or covered by meninges and skin.
36. ***Endoderm:*** The inner layer of the embryo in early development.
37. ***Epithalamus:*** A part of the diencephalon composed of the pineal gland, habenular trigone, caudal commissure, and medullary layers of the thalamus.
38. ***Ethmoid bone:*** A portion in the skull, located at the roof of the nose between the two orbits, that separates the nasal cavity from the brain.
39. ***Exencephaly:*** A developmental anomaly characterized by loss of the dorsal skull leading to exposure of the brain (**Figure 27**). This gross lesion is the most common neural tube defect in mice.
40. ***External granule cell layer:*** The sheet of stem cells on the surface of the cerebellar folia that gives rise to the neurons of the granule cell layer. Granule cell precursors are first produced in the rhombic lip and migrate tangentially across the surface of the cerebellar primordium to form the external granule cell layer, which is a secondary germinal zone. This domain disappears in mice by the third postnatal week.
41. ***Fetus:***In technical terms, fetuses are the prenatal stages during gestation in which organogenesis has been completed and further development represents differentiation and growth of organs and systems (a period in mice extending from E15 to birth. By common usage, the short length of this period in this species typically results in all prenatal mice being designated as “embryos.”
42. ***Fornix of hippocampus:*** A C-shaped bundle of nerve fibers (axons) that is the major output tract of the hippocampus.
43. ***Ganglion:*** A structure, typically outside the CNS, containing a number of neurons (cell bodies), often forming a local swelling of the nerve.
44. ***Ganglionic eminence:*** A transitory brain structure that guides cell and axon migration which is found between the thalamus and caudate nucleus. This structure gives rise to the basal nuclei.
45. ***Germinal zone:*** These domains are proliferative zones containing neural progenitor cells (for both neurons [neuroblasts] and glia [glioblasts]). Two prominent germinal zones in the forebrain are the ventricular zone and the subventricular zone (**Figure 7**).
46. ***Glioblasts:*** A cell derived from neuroectoderm with the ability to differentiate into several different types of neuroglia. Glioblasts arise from the neuroprogenitor cells of the ventricular (germinal) zone.
47. ***Globus pallidus:*** A subcortical structure that is a major component of the basal nuclei. It is involved in the regulation of voluntary movement.
48. ***Granule cell layer:*** The innermost of the three layers of the cerebellar cortex. Granule cells receive all of their input from mossy fibers, which are a major input entering the cerebellum from the cerebral cortex and to a lesser extent the deep cerebellar nuclei, spinal cord, and reticular formation.
49. ***Head folds:***Longitudinal folding of the neural tube in embryos produces elevated folds—representing the brain primordium—that project dorsally into the amniotic cavity. Also called cephalic neural folds.
50. ***Hindbrain:*** The part of the brainstem composed of the cerebellum, pons and medulla oblongata.
51. ***Hippocampus:*** Curved, elongate, bilaterally symmetrical gray matter ridges—essentially internal gyri (gray matter) of the cerebral hemispheres—that extends over the floor of the descending horn of each lateral ventricle. They are covered on the ventricular surface by a layer of white matter.
52. ***Holoproencephaly:*** A rare congenital condition in which the prosencephalon (forebrain) fails to develop into two hemispheres (**Figure 27**). It is often accompanied by facial abnormalities.
53. ***Hypothalamus:*** Region of the forebrain (ventral and medial regions of the diencephalon) that coordinates the autonomic nervous system and the activities of the pituitary gland.
54. ***Infundibular recess:*** A small angular diverticulum from the floor of the third ventricle, immediately above the pituitary stalk, that extends ventrally (inferiorly) into the stalk. It is caudal to the supra-optic recess.
55. ***Internal capsule:*** A deep subcortical structure containing a concentration of cerebrocortical projection fibers. It separates the caudate nucleus (a basal nucleus) and thalamus from the lentiform nucleus and serves as the major route by which the cerebral cortex is connected with the brainstem and the spinal cord.
56. ***Interneurons:*** A specialized, small, often granule-type neuron that primarily serves to connect other types of neurons. One key type, inhibitory cortical interneurons, use the neurotransmitter gamma-aminobutyric acid (GABA).
57. ***Interventricular foramina:*** Channels that connect the lateral ventricles with the third ventricle.
58. ***Lateral ventricles:*** Large, curved cavities containing cerebrospinal fluid (CSF), located within each cerebral hemisphere that develop as expansions from the central canal of the neural tube.
59. ***Lens placodes:*** Paired, thickened ectodermal regions that invaginate to form the lens vesicles of the eyes.
60. ***Lumbar intumescence:*** Enlargement of the lumbar spinal cord (typically at L3-L4, though the levels vary by strain) due to expansion of the ventral horns (housing the motor neurons that supply nerves to the hind limbs). Also called the lumbosacral intumescence.
61. ***Macroencephaly:*** A congenital or acquired condition characterized by an abnormally large brain.
62. ***Mammotrophs:*** An acidophilic cell of the adenohypophysis that produces prolactin.
63. ***Medulla oblongata:*** Part of the caudal brainstem that is continuous with the spinal cord and controls involuntary vital functions.
64. ***Meningocele:*** A small neural tube closure defect, typically observed on the midline, in which a small opening in the skull or vertebral column permits protrusion of a small amount of meninges but not the underlying neural tissue. These lesions may be covered by skin.
65. ***Mesencephalon:*** The region connecting the forebrain and hindbrain, associated with such functions as vision, hearing, motor control, sleep/wake cycles, alertness and temperature regulation. Also known as the midbrain.
66. ***Mesoderm:*** The middle layer of the embryo in early development. It lies between the endoderm (inner layer) and ectoderm (ectoderm).
67. ***Microencephaly:*** A congenital condition in which the brain (typically the cerebrum [(i.e., cerebral hemispheres]) is small.
68. ***Microglia:*** small glial cells with few processes that are scattered throughout the brain and spinal cord. These cells arise from blood-borne mesodermal progenitors, act when needed as phagocytes, and are the main form of immune surveillance in the CNS.
69. ***Molecular layer:*** The outer cortical layer in the folia of the cerebellum and the cerebrum, consisting of sparsely unmyelinated nerve fibers rich in synapses.
70. ***Myelencephalon:*** The caudal part of the developing hindbrain from which the medulla oblongata develops (**Figure 2**).
71. ***Myelination:*** The process by which an axon acquires a myelin sheath, the presence of which allows impulses to move more quickly along the nerve fiber.
72. ***Nerve fiber:*** an process extending from a neuron, typically comprised of an axon and its associated myelin sheath.
73. ***Neural crest:*** The apical ridges of the folds that form the neural tube. This region gives rise to the dorsal root ganglia, various structures of the autonomic nervous system throughout the body, and also contributes cells to the craniofacial structures of the head.
74. ***Neural fold:*** The parallel lateral longitudinal elevations that form on each side of the neural plate, which over time will meet and become fused with the opposite fold (“zipping”) at the dorsal midline to give rise to the neural tube.
75. ***Neural groove:*** The shallow median longitudinal groove formed by the neural plate after the appearance of the neural folds laterally.
76. ***Neural plate:*** A thickened sheet of ectoderm along the dorsal midline of the early (flat) embryo, surrounded on either side by the neural folds, that gives rise to the neural tube and neural crests.
77. ***Neural tube:*** The hollow longitudinal dorsal tube that will eventually form the brain and spinal cord. The neural tube is formed by elevation and infolding with subsequent fusion (“zipping”) of the opposing neural folds.
78. ***Neural tube closure:*** The act by which the edges of the elevating neural folds come in close apposition at the dorsal midline and then fuse by “zipping” to form the neural tube. Fusion begins in the region of the cranial spinal cord and then extends in both directions.
79. ***Neural tube defect:*** Malformations in which some or all of the neural tube fails to close (**Figure 27**). NTDs seen in mice include anencephaly, craniorachischisis, encephalocele, exencephaly, and meningocele. Also referred to as “neural tube closure defects.”
80. ***Neural tube ependymal layer:*** The innermost of the three cellular layers of the neural tube, comprised of highly proliferative progenitor cells.
81. ***Neural tube mantle layer:*** The middle of the three cellular layers of the neural tube.
82. ***Neural tube marginal layer:*** The outer of the three cellular layers of the neural tube, comprised of developing white matter
83. ***Neuroblasts:*** Dividing cells that differentiate from totipotent neural stem cells and serve as the pluripotent precursors of all nondividing neurons.
84. ***Neuroectoderm:*** The portion of the embryonic ectoderm (outer germinal layer) that will develop into central and peripheral nervous tissue.
85. ***Neurohypophysis:*** The caudal pituitary gland that stores and releases oxytocin and vasopressin (produced previously in the hypothalamus). Also referred to as the “pars nervosa.”
86. ***Neuromere:*** Segments of the neural tube that establish the various embryonic brain regions during development (comparable to somites associated with the spinal cord). During [neurulation](http://www.sciencedirect.com/topics/page/Neurulation), the neural tube closes and becomes patterned along the craniocaudal axis (neuromeres) and also the dorsoventral axis (roof, alar, basal, floor plates).
87. ***Neuronogenesis:*** Neuron formation.
88. ***Neuropore:*** The openings at the rostral and caudal ends of the neural tube.
89. ***Neurulation:*** The folding process whereby the neural plate transforms into the neural tube.
90. ***Notochord:*** An embryonic midline structure, composed of a flexible rod of mesodermal cells that secretes factors to surrounding tissues to determine position and fate (**Figure 4**). It is also a major skeletal (cartilaginous) element of the developing embryo.
91. ***Nucleus accumbens:*** A region in the basal forebrain, rostral to the preoptic area of the hypothalamus, that serves as the reward center. Key neurotransmitters for this region include dopamine and serotonin.
92. ***Olfactory bulb:*** Area in the rostral brain where the olfactory nerve fibers terminate after passing through the cribriform plate.
93. ***Olfactory cortex:*** The portion of the cerebral cortex that receives direct sensory input from the olfactory bulb.
94. ***Oligodendrocytes:*** A glial cell with a main function in forming the myelin sheath around central nervous system axons (e.g., brain, spinal cord, and optic nerve), providing support and insulation.
95. ***Olivary nucleus:*** Neurons from this nucleus in the medulla oblongata are a major source of cerebellar input regulating motor function. In primates, this nucleus is designated the “inferior olivary nucleus” (or inferior olivary complex).
96. ***Ontogenesis:*** The development of an organism from the earliest embryonic stage to maturity.
97. ***Optic recesses:*** Small diverticula at the junctions of the floor and rostral wall of the third ventricle, just above the optic chiasm. These regions are the areas where the hollow optic vesicles were originally attached to the ventral and lateral parts of the forebrain.
98. ***Optic stalks:*** Extensions that, once the choroid fissures closes, become the optic nerves.
99. ***Optic vesicles:*** Diverticula on the ventrolateral aspects of the forebrain that will develop into the optic cups. The inner layers of the optic cups will form the retinas, and the outer layers will form the retinal pigmented epithelium (RPE). The middle portions will form the ciliary bodies and irises.
100. ***Organ primordium:*** A collection of primordial cells (i.e., anlage) for an organ in its earliest recognizable stage of development. (Pleural form = primordia)
101. ***Organogenesis:*** The period during gestation during which primordia of embryonic organs are initially formed.
102. ***Otic placodes:*** The thickened ectoderm from which the ears develop. These areas will invaginate into the mesenchyme adjacent to the rhombencehphalon to form the otic pit.
103. ***Paravertebral region:*** An area located beside or adjacent to the spinal column.
104. ***Pars intermedia:*** The middle zone between the rostral and caudal lobes of the pituitary gland, containing basophils, chromophobes and colloid-filled cysts (which represent remnants of Rathke’s pouch).
105. ***Pars tuberalis:***Part of the rostral [lobe of the pituitary gland](https://en.wikipedia.org/wiki/Anterior_pituitary), which wraps the [pituitary stalk](https://en.wikipedia.org/wiki/Pituitary_stalk) in a highly vascularized sheath.
106. ***Perinatal:*** Related to the period around (just before and after) the time of birth.
107. ***Pia mater:*** The innermost layer of the meninges that firmly adheres to the surface of the brain and spinal cord and contains capillaries. The other meningeal layers are the arachnoid mater (middle layer) and dura mater (outer layer).
108. ***Pineal gland:*** A small cone-shaped endocrine gland, located dorsally between the two halves of the thalamus, that secretes melatonin. The pineal primordium begins as an evagination of neuroepithelium in the roof of the third ventricle.
109. ***Pineal recess:*** A small angular diverticulum at the caudal margin of the third ventricle, extending caudally into the stalk of the pineal gland.
110. ***Pinealocytes:*** An epithelioid cell of the pineal body involved in melatonin secretion and regulation of circadian rhythms.
111. ***Pons:*** Part of the metencephalon (rostral brainstem) lying between the medulla oblongata and the midbrain, and ventral to the cerebellum. Origin of cranial nerves V, VI, VII and VIII.
112. ***Prechordal plate:*** A small area rostral to the cephalic lip of the notochord where the ectoderm and endoderm are in contact.
113. ***Preoptic recess:*** The small cranioventral extension of the third ventricle.
114. ***Preplate:*** The earliest set of migrating neurons in the early embryo form a primitive structure called the preplate. Once the preplate is complete, the next wave of migrating neurons split the preplate into the marginal zone and the subplate.
115. ***Primary neurulation:*** Process of neural tube formation by elevation and fusion of the neural folds to yield neural tube closure.
116. ***Primitive node:***A locus at the rostral end of the primitive streak that serves as an organizing region during establishment of the embryonic axis. Analogous to Hensen’s node in the chick and the shield inthe frog (*Xenopus*)*.*
117. ***Primitive streak:*** A faint white streak at the caudal end of the embryonic disk that is formed by the movement of cells at the beginning of mesoderm formation. This line is the first evidence of the embryonic cephalocaudal axis and will eventually disappear.

***Projection neurons:*** A specialized, typically medium to large, pyramidal neuron in the cerebral cortex that connects cerebrocortical cells to subcortical neurons in the brain and spinal cord. The key type, excitatory cells using glutamine as a neurotransmitter, comprise approximately 80% of all cortical neurons.

1. ***Prosencephalon:*** The most rostral of the three primary brain vesicles (**Figure 2**). Later divides into the telencephalon and diencephalon.
2. ***Purkinje cells:*** A class of GABAergic neurons located in the cerebellum that receive impulses from cerebellar granule cells.
3. ***Pyramidal cells:*** Large neurons of the cerebral cortex with dendrites that project up into the most superficial cerebrocortical layer and axons that run deeply (usually serving as projection neurons). Cells with this phenotype are also located in the hippocampus and amygdala.
4. ***Radial glia:*** Primary progenitor cells that occur transiently during development and are capable of generating neurons, astrocytes and oligodendrocytes. They also serve as scaffolds for migration of developing neurons, especially from the ventricular surface to the cerebral and cerebellar cortices.
5. ***Rathke’s pouch:*** A pocket of ectoderm that grows out from the upper surface of the stomodeum (cranial ectodermal part of the digestive tract), giving rise to the rostral pituitary gland (i.e., adenohypophysis).
6. ***Rhombencephalon:*** One of three primary brain vesicles, specifically serving as the precursor of the hindbrain (i.e., cerebellum, pons, and medulla oblongata).
7. ***Rhombic lip:*** The caudal section of the metencephalon, located between the fourth ventricle and the roof plate.
8. ***Rhombomeres:*** Distinct segments of neuroepithelial differentiation (i.e., neuromeres) in portion of the neural tube that will become the developing hindbrain. Eight such segments may be identified along the rostrocaudal axis.
9. ***Sagittal sections:*** Tissue slices obtained in a side-to-side orientation, yielding a longitudinal view of the brain and spinal cord. The embryo is positioned on its side (usually the left one since the caudal body curves out and to the right) at the bottom of the mold and gently tipped to lie in a balanced position with the sagittal plane parallel to that of the mold base. These sections are made for easier viewing of each half of the brain.
10. ***Secondary neurulation:*** The process following primary neurulation (i.e., neural tube closure) whereby a solid cord of neuroectoderm mixed with endoderm is hollowed out to form the caudal-most aspect of the neural tube. This process begins at or around the level of somite 35 in mice (and humans).
11. ***Somatotrophs:*** A type of acidophil of the pituitary adenohypophysis that secretes the growth hormone somatotropin.
12. ***Somites:*** Bilaterally paired blocks of condensed paraxial mesoderm. As the primitive streak regresses and neural folds develop, the paraxial mesoderm will separate and subdivide into sclerotomes (bone anlagen), myotomes (skeletal muscle anlagen), and dermatomes (cutaneous anlagen) for particular spinal cord segments.
13. ***Spina bifida:*** A neural tube closure defect affecting the spinal cord and to a variable degree the overlying vertebrae and soft tissues.
14. ***Stage-matched:***A control group that is selected based on one or more macroscopic features of the developing embryo rather than in relation to a presumed time of conception. This type of control is especially important in cases where mating is allowed to proceed for an extended period (e.g., overnight) rather than for a discrete period (e.g., 2 hours) as the difference in the developmental stages of the youngest and oldest embryos in a litter varies by 12 to 24 hours.
15. ***Striatum:*** One basal nucleus in the subcortical forebrain. The caudate nucleus and putamen make up the dorsal striatum. The nucleus accumbens and olfactory tubercle make up the ventral striatum.
16. ***Subventricular zone:*** A transient secondary proliferative zone, located between the ventricular zone and intermediate zone of the forebrain, containing neural progenitor cells (radial glial cells) that divide to produce neurons and glia.
17. ***Sulcus limitans:*** A zone located in the floor of the fourth ventricle and spinal cord that separates the motor nuclei of the basal plate (located ventrally) from the sensory nuclei of the alar plate (located dorsally).
18. ***Synaptogenesis:*** The formation of synapses between neurons. In mice (and humans), this process occurs extensively well after birth.
19. ***Tail bud:*** The primordium of the caudal part of the embryo, formed of undifferentiated mesenchymal cells representing the remains of Hensen’s node and the primitive streak.
20. ***Telencephalon:*** The most cranial of the two divisions of the prosencephalon (**Figure 2**), this secondary brain vesicle will become the cerebrum. The dorsal telencephalon will become the cerebral cortex, and the ventral telencephalon will become the basal nuclei.
21. ***Thalamus:*** Two masses of grey matter that lay between the cerebral hemispheres on either side of the third ventricle.
22. ***Transverse sections:*** Tissue slices obtained perpendicular to the cranial-caudal axis of the embryo. The embryo is oriented head down in the mold with the tail in the uppermost position.
23. ***Trigeminal ganglion:*** Sensory ganglion of the cranial nerve (V), located on either side of the pituitary gland on the ventral floor of the cranial vault.
24. ***Ventricular zone:*** A transient proliferative layer containing neural and glial progenitor cells, mostly radial glial cells. This zone lines the ventricular system. Also referred to as the ependymal layer or zone.
25. ***Vomeronasal organ:*** An organ, located near the vomer and nasal bones, that is an auxiliary olfactory sense organ used to detect pheromones. During embryonic development, the nerve fibers constitute a substrate for the migration of gonadotropin-releasing hormone (GnRH)-secreting cells from the olfactory placode toward the hypothalamus.