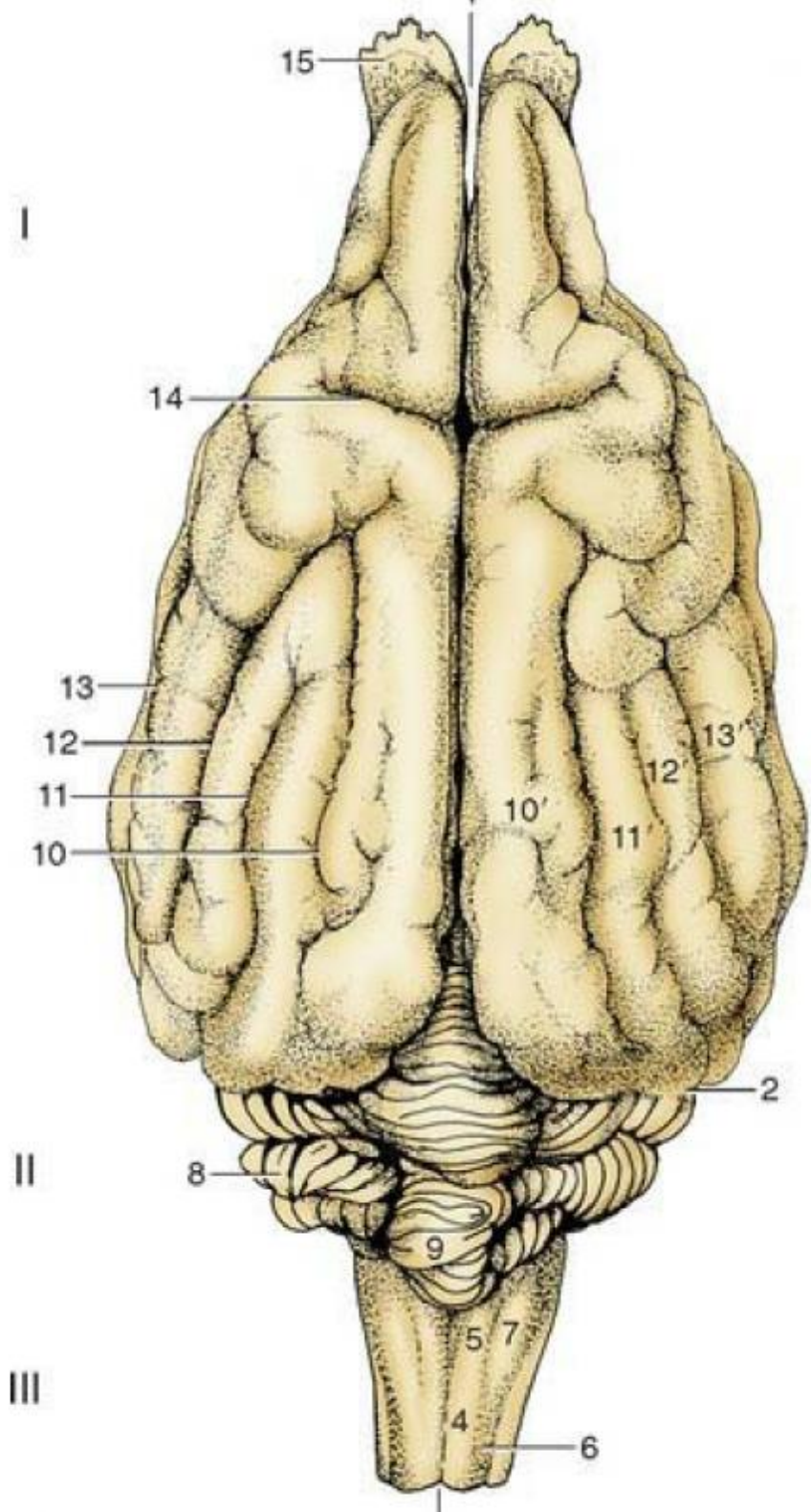


# Telencéfalo, Rinencéfalo e sistema límbico

23-11-23

# Telencéfalo

- Ele é a maior divisão do encéfalo e consiste de duas grandes massas de tecido nervoso semiovídes (os hemisférios cerebrais) separadas uma da outra pela fissura longitudinal e separadas do cerebelo que se encontra caudalmente pela fissura transversa.
- Cada hemisfério apresenta para descrição uma face medial, uma dorsolateral e outra basal.
- Os hemisférios podem ser dividido em lobos de acordo com as relações que eles apresentam com alguns ossos do crânio, sendo divididos em: lobo frontal, lobo occipital, lobo parietal e lobo temporal.
- Estruturalmente cada hemisfério consiste de uma camada externa de substância cinzenta (o córtex cerebral), abaixo da qual está a substância branca no meio da qual encontram-se núcleos de substância cinzenta (os núcleos da base) que são: o núcleo caudado, o lentiforme, a amígdala e o cláustro.



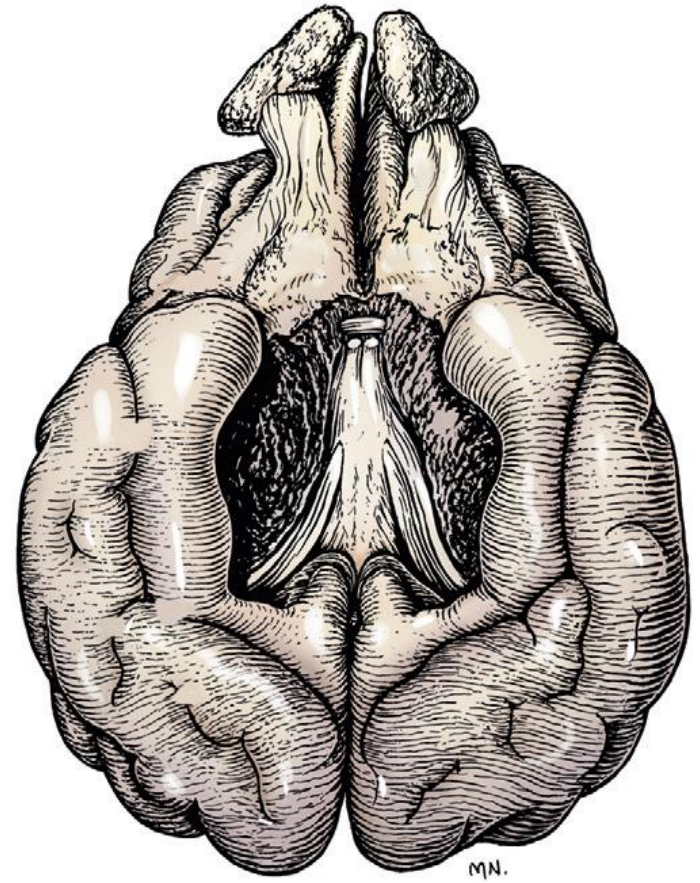
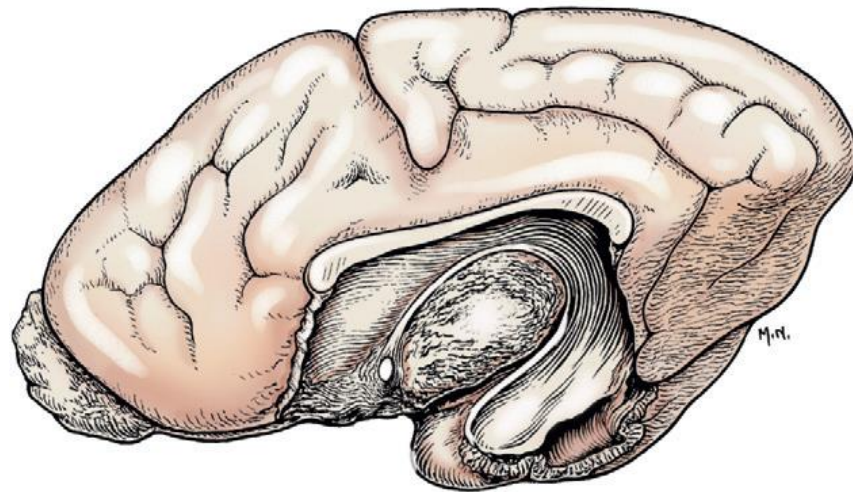
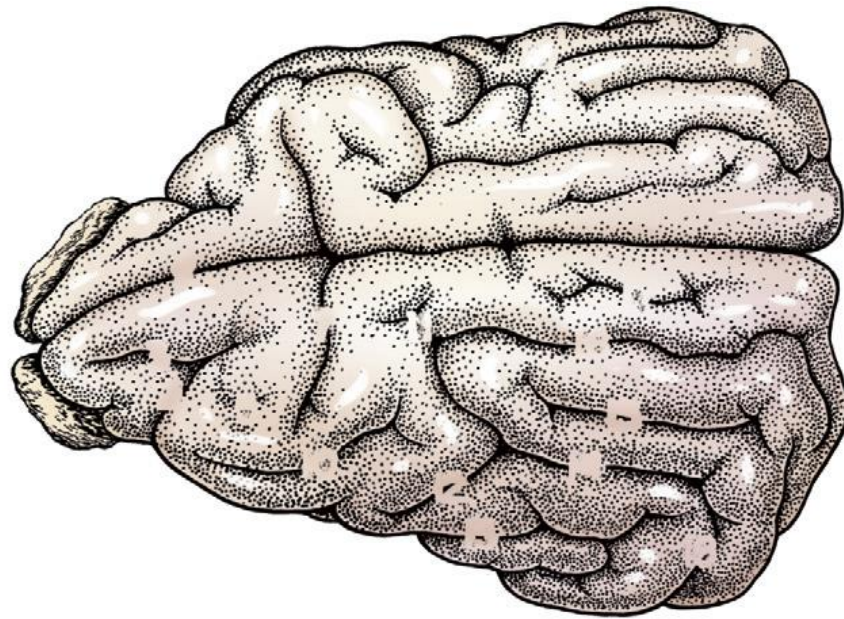
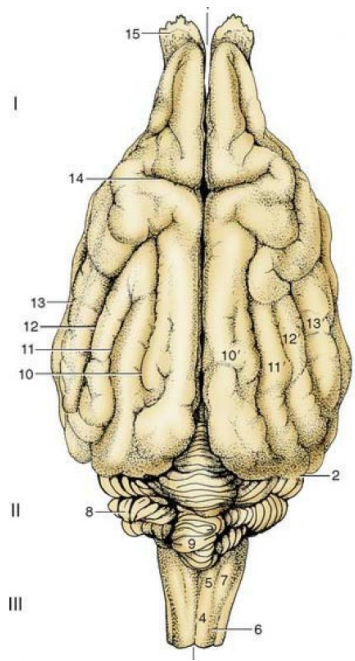
Cérebro

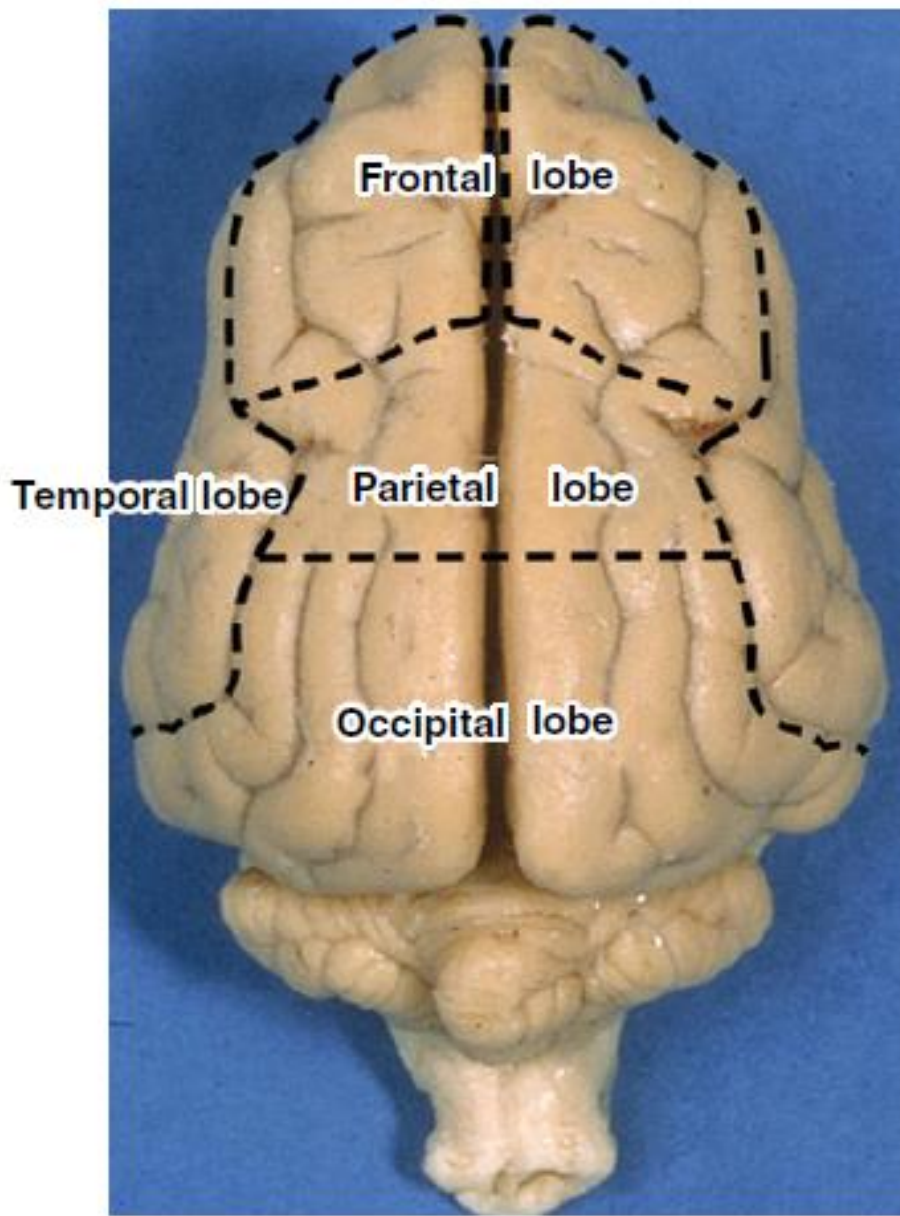


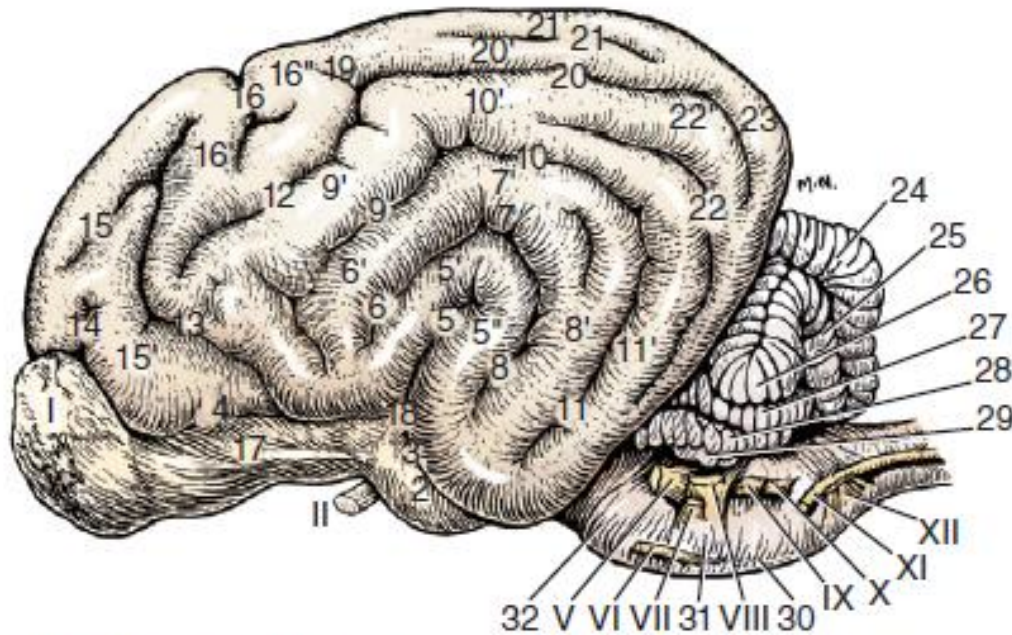
Cerebelo



Tronco Encefálico

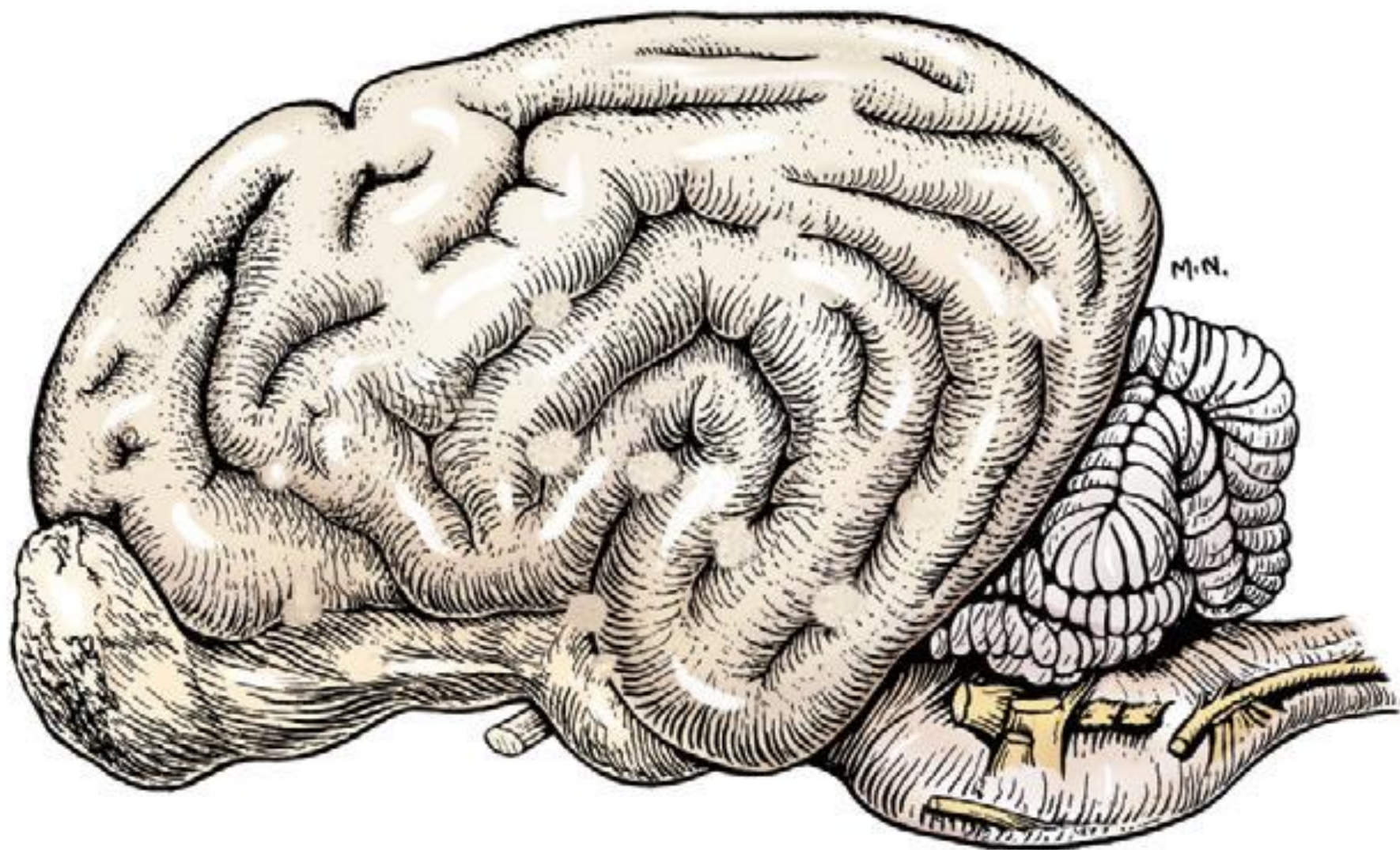


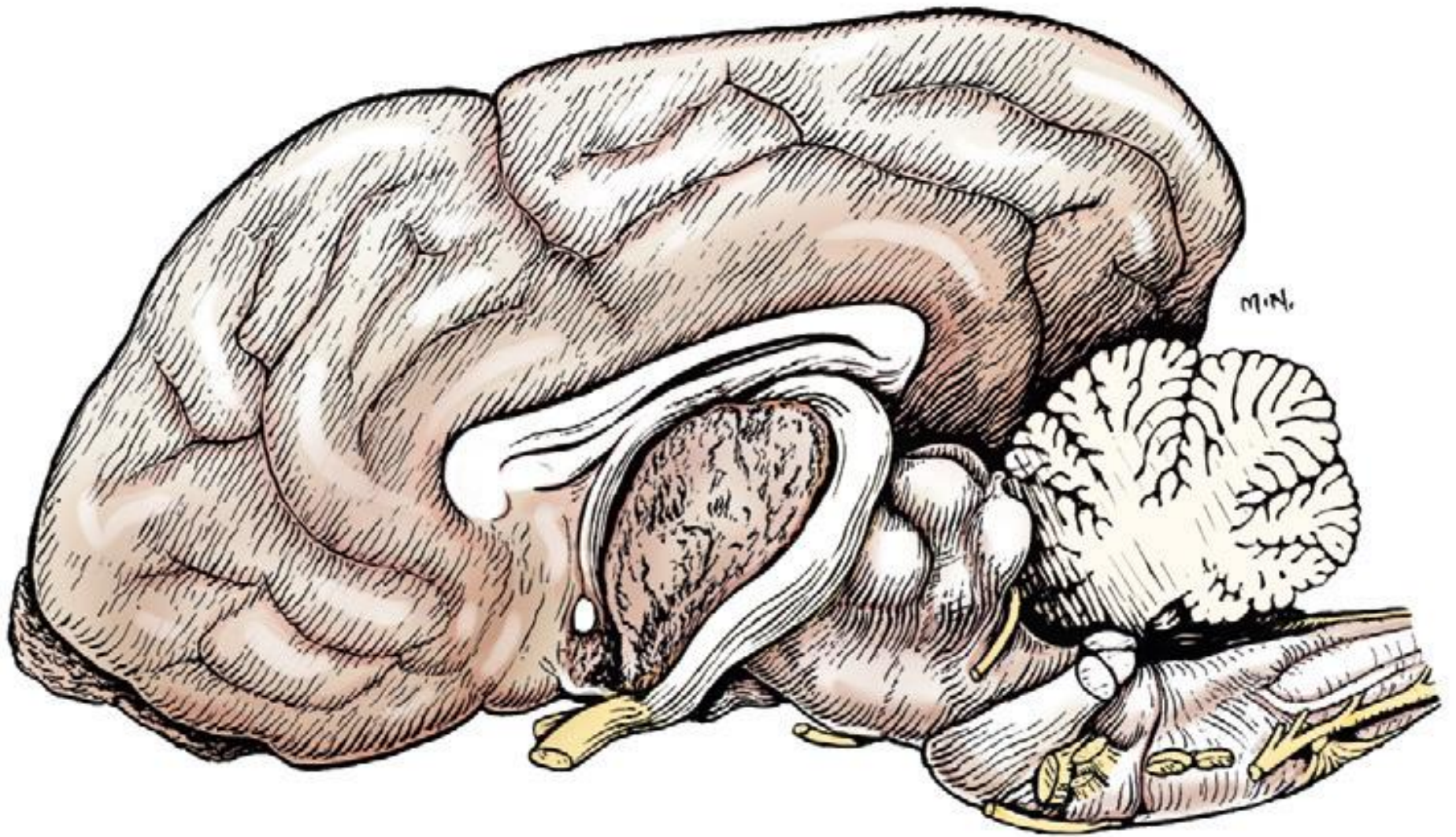




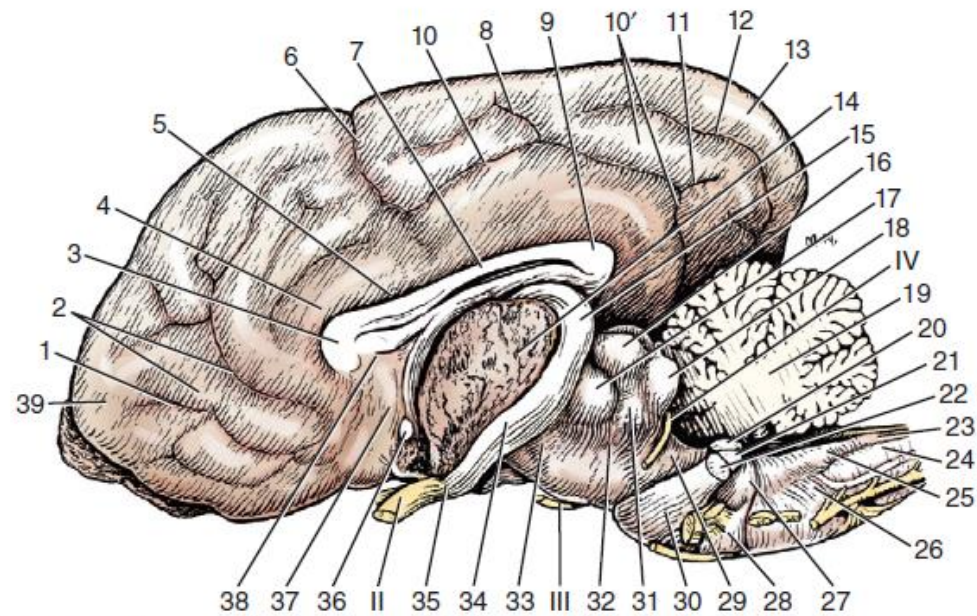
**FIGURE 18-31** Lateral view of the brain. The ventral part of the cerebral hemisphere is associated with olfactory axonal input and is designated rhinencephalon.

- |  |                               |
|--|-------------------------------|
| 1. Olfactory bulb                        | 17. Olfactory peduncle        |
| 2. Piriform lobe                         | 18. Insular region            |
| 3. Caudal part of lateral rhinal sulcus  | 19. Ansa sulcus               |
| 4. Rostral part of lateral rhinal sulcus | 20. Marginal sulcus           |
| 5. Pseudosylvian fissure                 | 20'. Marginal gyrus           |
| 5'. Rostral sylvian gyrus                | 21. Endomarginal sulcus       |
| 5". Caudal sylvian gyrus                 | 21'. Endomarginal gyrus       |
| 6. Rostral ectosylvian sulcus            | 22. Ectomarginal sulcus       |
| 6'. Rostral ectosylvian gyrus            | 22'. Ectomarginal gyrus       |
| 7. Middle ectosylvian sulcus             | 23. Occipital gyrus           |
| 7'. Middle ectosylvian gyrus             | 24. Vermis of cerebellum      |
| 8. Caudal ectosylvian sulcus             | 25. Paramedian lobule         |
| 8'. Caudal ectosylvian gyrus             | 26. Ansiform lobule           |
| 9. Rostral suprasylvian sulcus           | 27. Dorsal parafloroculus     |
| 9'. Rostral suprasylvian gyrus           | 28. Ventral parafloroculus    |
| 10. Middle suprasylvian sulcus           | 29. Flocculus                 |
| 10'. Middle suprasylvian gyrus           | 30. Pyramid                   |
| 11. Caudal suprasylvian sulcus           | 31. Trapezoid body            |
| 11'. Caudal suprasylvian gyrus           | 32. Pons                      |
| 12. Coronal sulcus                       | II. Optic nerve               |
| 13. Presylvian sulcus                    | V. Trigeminal nerve           |
| 14. Prorean sulcus                       | VI. Abducent nerve            |
| 15. Prorean sulcus                       | VII. Facial nerve             |
| 15'. Prorean gyrus                       | VIII. Vestibulocochlear nerve |
| 16. Cruciate sulcus                      | IX. Glossopharyngeal nerve    |
| 16'. Precruciate gyrus                   | X. Vagus nerve                |
| 16". Postcruciate gyrus                  | XI. Accessory nerve           |
|  | XII. Hypoglossal nerve        |



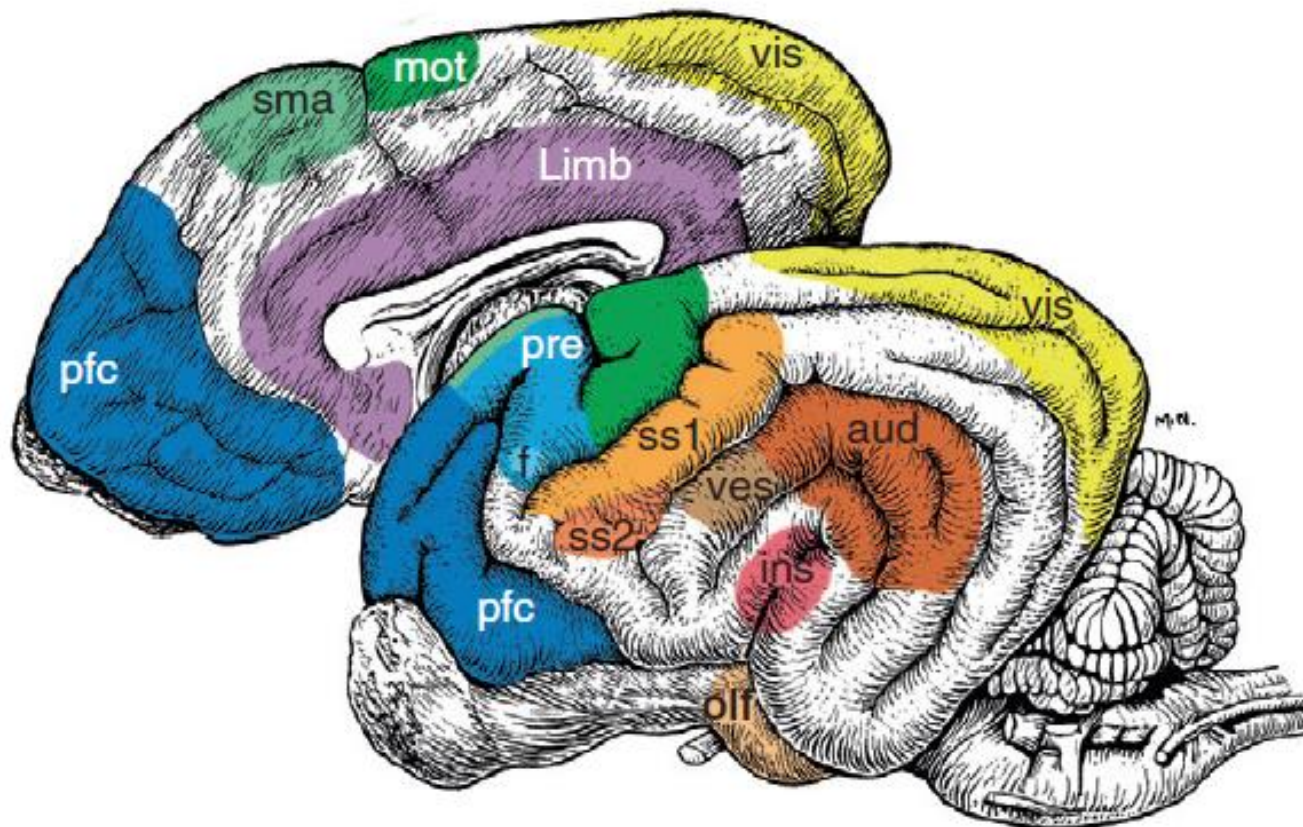




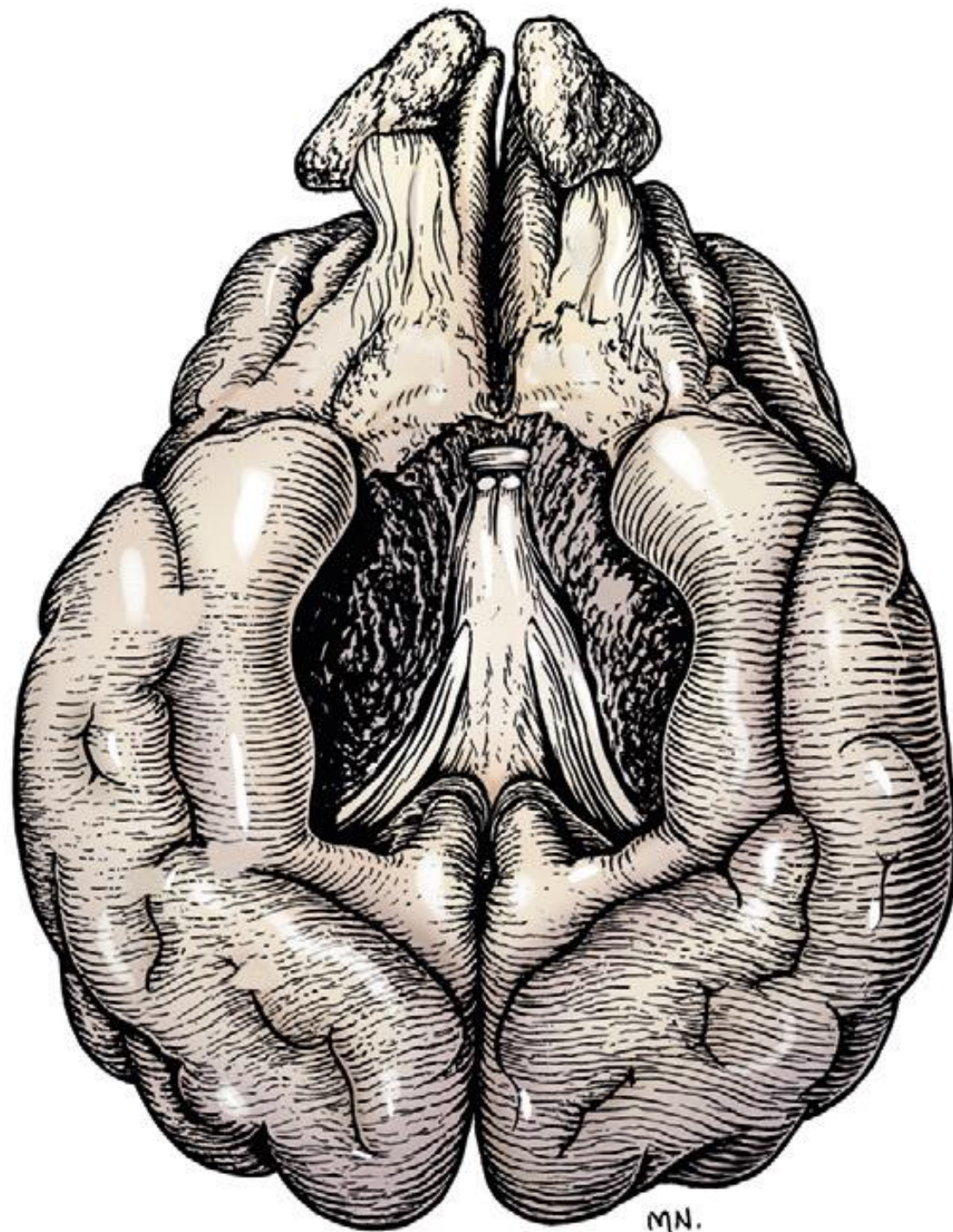


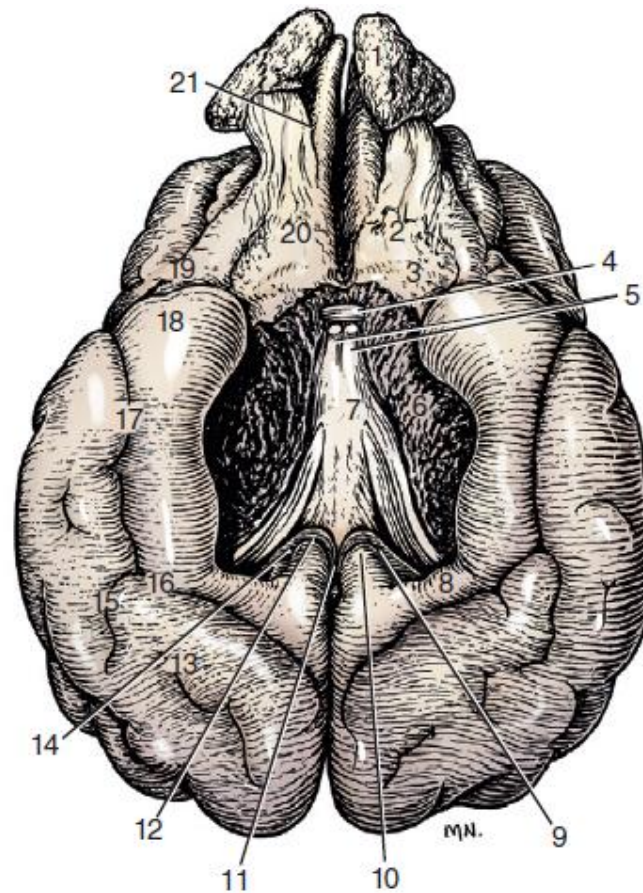
**FIGURE 18-17** Lateral view of the brain with the left cerebral hemisphere and the left half of the cerebellum removed from the intact brainstem. Rostral (16) and caudal (18) colliculi are shown.

- |  |   |                                   |
|--|---|-----------------------------------|
| 1. Ectogenu sulcus                             | 15. Optic tract and Lateral geniculate body | 30. Transverse fibers of pons     |
| 2. Genua gyrus and sulcus                      | 16. Rostral colliculus                      | 31. Brachium of caudal colliculus |
| 3. Genu of corpus callosum                     | 17. Medial geniculate body                  | 32. Transverse crural tract       |
| 4. Cingulate gyrus                             | 18. Caudal colliculus                       | 33. Crus cerebri                  |
| 5. Callosal sulcus                             | 19. Cerebellum                              | 34. Left optic tract              |
| 6. Cruciate sulcus                             | 20. Rostral cerebellar peduncle             | 35. Optic chiasm                  |
| 7. Body of corpus callosum                     | 21. Caudal cerebellar peduncle              | 36. Rostral commissure            |
| 8. Ramus of splenial sulcus                    | 22. Middle cerebellar peduncle              | 37. Septum (paraterminal gyrus)   |
| 9. Splenium of corpus callosum                 | 23. Fasciculus cuneatus                     | 38. Septum pellucidum             |
| 10. Splenial sulcus                            | 24. Spinal tract of trigeminal nerve        | 39. Frontal gyrus                 |
| 10'. Splenial gyrus and sulcus                 | 25. Nucleus cuneatus lateralis              | II. Optic nerve                   |
| 11. Caudal horizontal ramus of splenial sulcus | 26. Superficial arcuate fibers              | III. Oculomotor nerve             |
| 12. Suprasplenial sulcus                       | 27. Cochlear nuclei                         | IV. Trochlear nerve               |
| 13. Occipital gyrus                            | 28. Trapezoid body                          |                                   |
| 14. Cut surface of internal capsule            | 29. Lateral lemniscus                       |                                   |



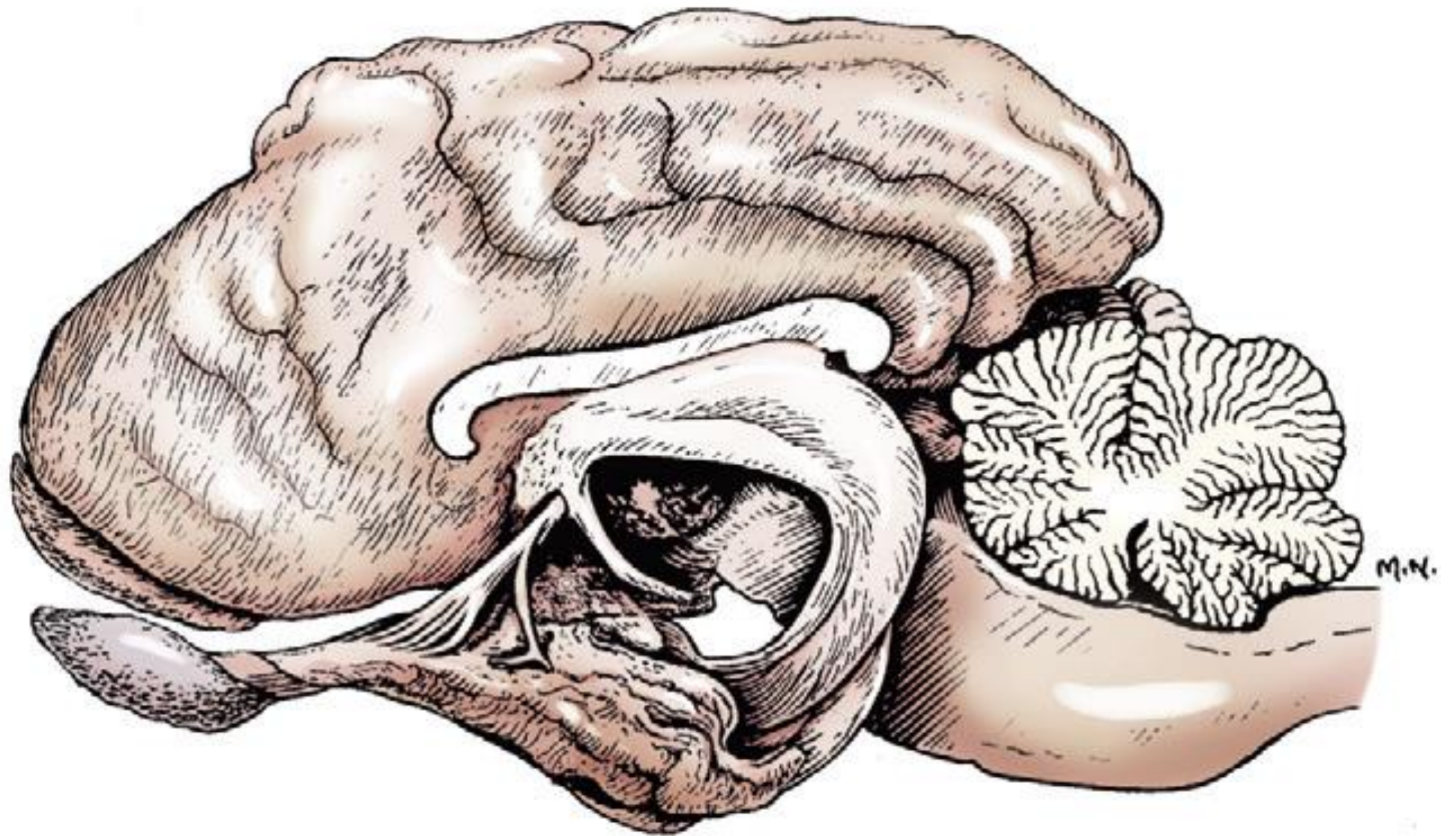
**FIGURE 18-42** Approximate locations of selected functional areas of cerebral cortex are shown in lateral and median views of canine cerebral hemispheres. The following abbreviations are used (*white labels* are movement related and *black labels* are sensory related): *aud*, auditory area; *f*, frontal eye field; *ins*, insular area; *limb*, limbic cortex; *mot*, motor cortex; *olf*, olfactory area; *pfc*, prefrontal cortex; *pre*, premotor cortex; *sma*, supplementary motor area; *ss1*, somatosensory area I; *ss2*, somatosensory area II; *ves*, vestibular area; *vis*, visual area.

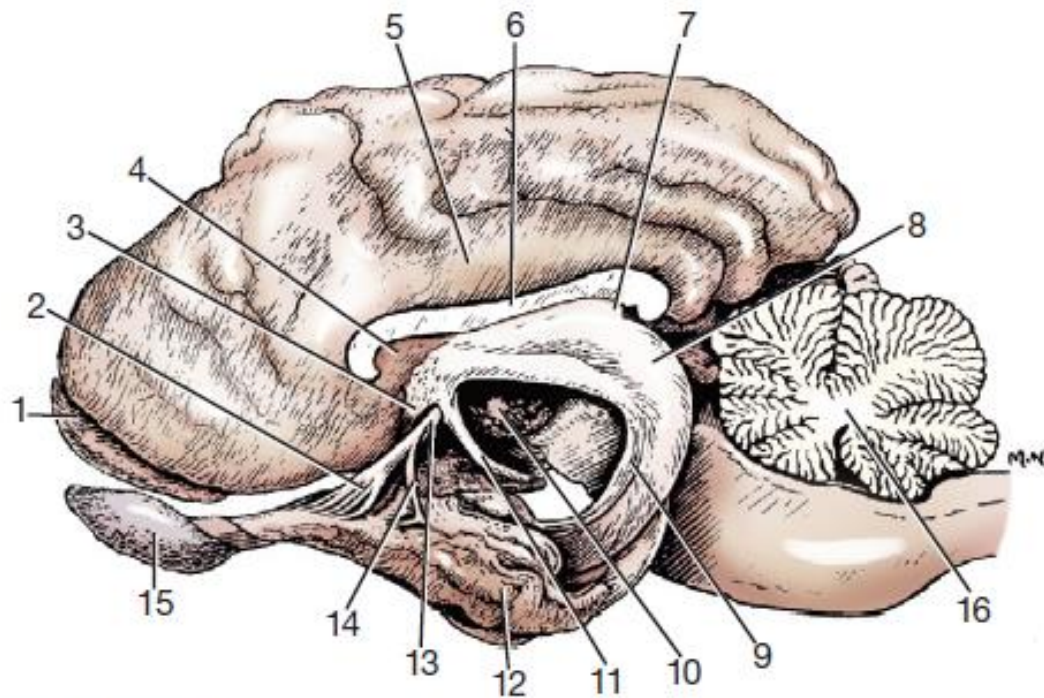




**FIGURE 18-28** A ventral view of the cerebrum. The rhinencephalon is demarcated from the rest of the hemisphere by the lateral rhinal sulcus (16, 17, 19).

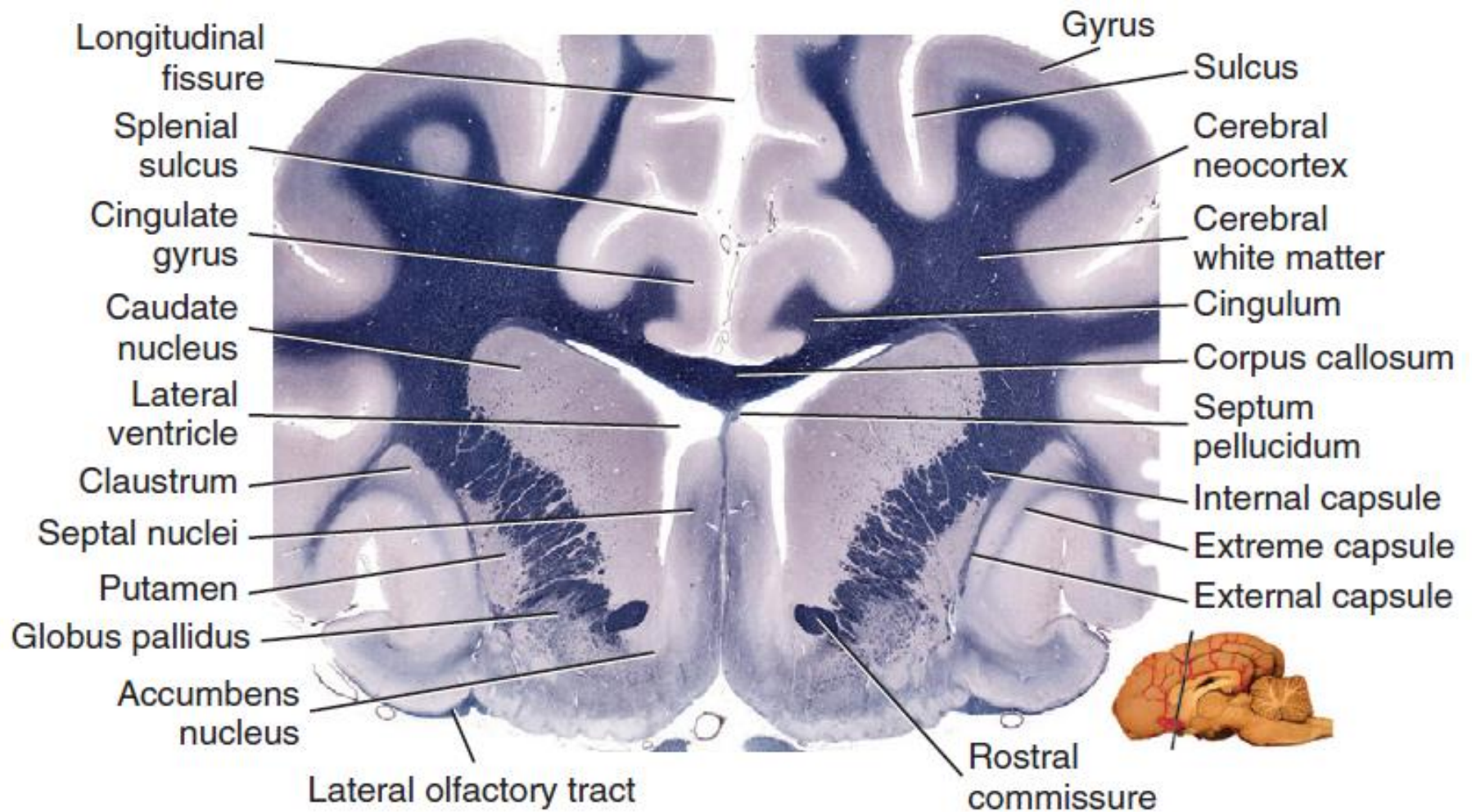
- |  |   |
|--|---|
| 1. Olfactory bulb                        | 13. Occipital lobe                        |
| 2. Olfactory tubercle                    | 14. Dentate gyrus                         |
| 3. Diagonal gyrus                        | 15. Ramus of lateral rhinal sulcus        |
| 4. Rostral commissure                    | 16. Caudal part of lateral rhinal sulcus  |
| 5. Columns of fornix                     | 17. Caudal part of lateral rhinal sulcus  |
| 6. Cut internal capsule                  | 18. Piriform lobe                         |
| 7. Body of fornix                        | 19. Rostral part of lateral rhinal sulcus |
| 8. Parahippocampal gyrus                 | 20. Olfactory peduncle                    |
| 9. Hippocampal sulcus                    | 21. Medial rhinal sulcus                  |
| 10. Callosal gyrus                       |   |
| 11. Subsplenial flexure of dentate gyrus |   |
| 12. Tubercle of dentate gyrus            |   |

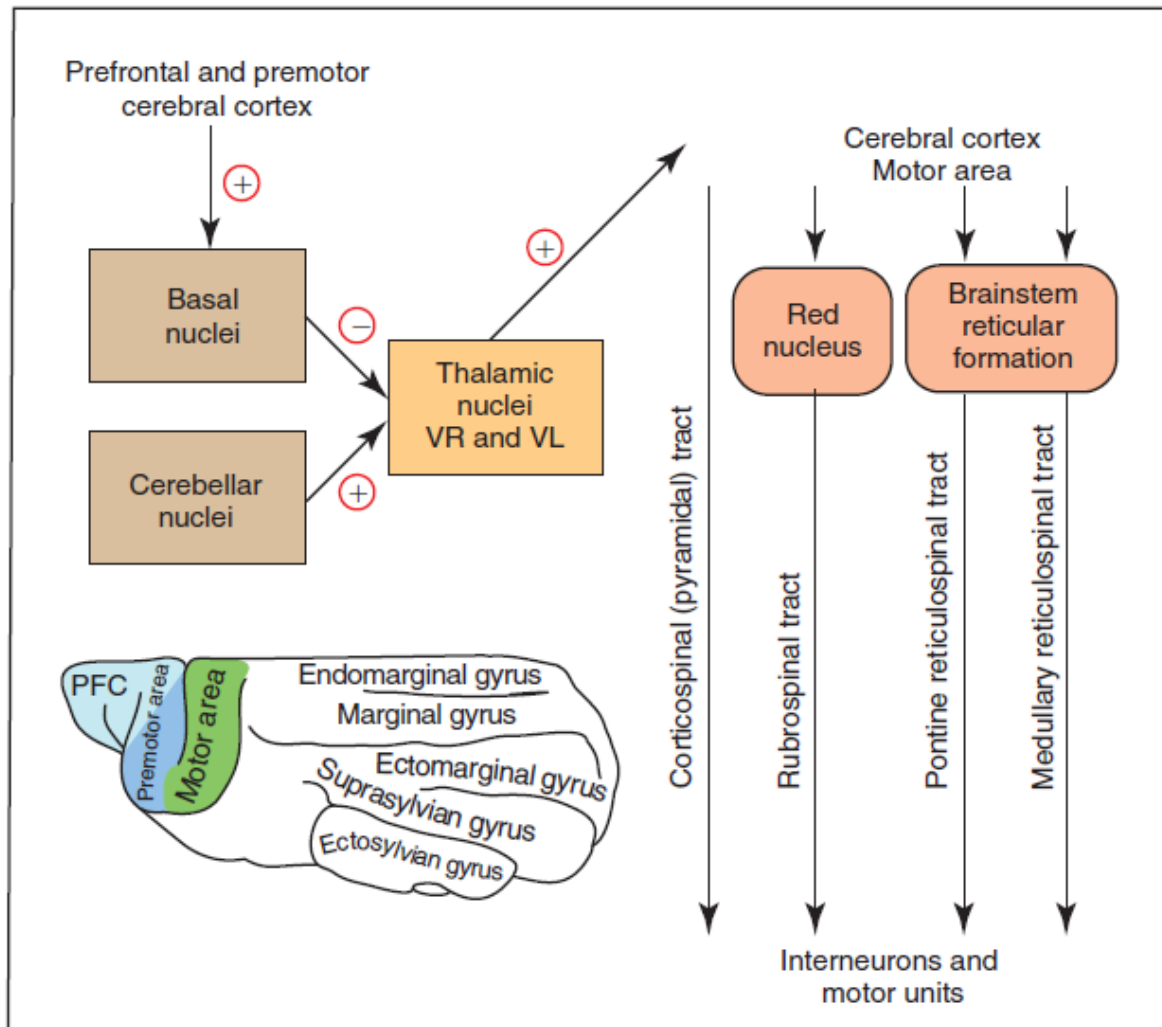




**FIGURE 18-38** Illustrated lateral view of a brain with the left half removed except for most of the left rhinencephalon. Rostral (2) and caudal (14) parts of the rostral commissure (13) are evident.

- |  |                                       |
|--|---------------------------------------|
| 1. Right olfactory bulb                        | 8. Hippocampus                        |
| 2. Rostral part of rostral commissure          | 9. Fimbria of hippocampus             |
| 3. Precommissural fornix                       | 10. Interthalamic adhesion            |
| 4. Septum pellucidum                           | 11. Column of fornix                  |
| 5. Medial surface of right cerebral hemisphere | 12. Piriform lobe (from dorsal side)  |
| 6. Corpus callosum                             | 13. Rostral commissure                |
| 7. Dorsal commissure of fornix                 | 14. Caudal part of rostral commissure |
|  | 15. Left olfactory bulb               |

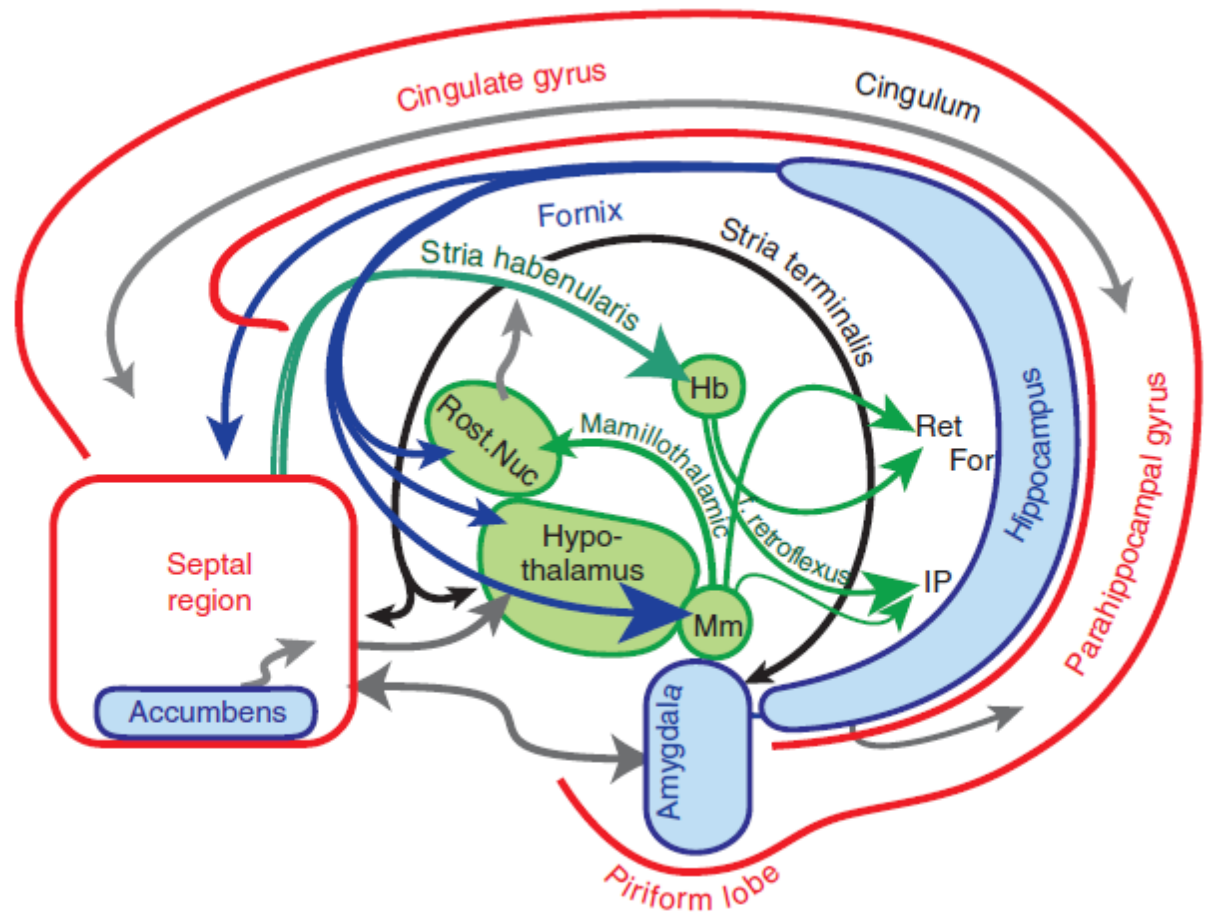




**FIGURE 18-43** Diagram of circuitry involved in voluntary movement. In general, voluntary movements are decided by prefrontal cortex, selected by premotor cortex, and executed by the motor area of the cerebral cortex. The motor area drives voluntary movement via four descending tracts that influence motor units through interneurons. The selection of desired movements and suppression of unwanted movements involve basal nuclei circuits that inhibit thalamic projections to the motor cortex (ventral rostral [VR] nucleus). The cerebellum corrects errors in ongoing movements via cerebellar nuclei that excite thalamic projections to the motor cortex (ventral lateral [VL] nucleus). The brain image inset shows locations of the motor area, premotor area, and prefrontal cortex (PFC).



**FIGURE 18-39** Right side schematic drawing of components of the limbic system and their connections from a medial perspective. Cerebral cortex forms the outer rim of the limbic system (shown in *red*). Deeper telencephalic components (basal nuclei and hippocampus) are colored *blue*. Diencephalic nuclei are colored *green* and midbrain components are *black*. Axonal tracts connecting limbic components include cingulum (white matter within the cingulate gyrus), fornix (output from the hippocampus), stria terminalis (a major output of the amygdala), several diencephalic tracts (*green*) and various unlabeled connections. The nucleus accumbens projects to motor nuclei in addition to sharing septal connections and rostral thalamic nuclei project to the cingulate gyrus. (*Rost. Nuc*, rostral thalamic nuclei; *Mm*, mamillary body; *Hb*, habenula; *IP*, interpeduncular nucleus; *Ret For*, reticular formation; *f.*, fasciculus.)



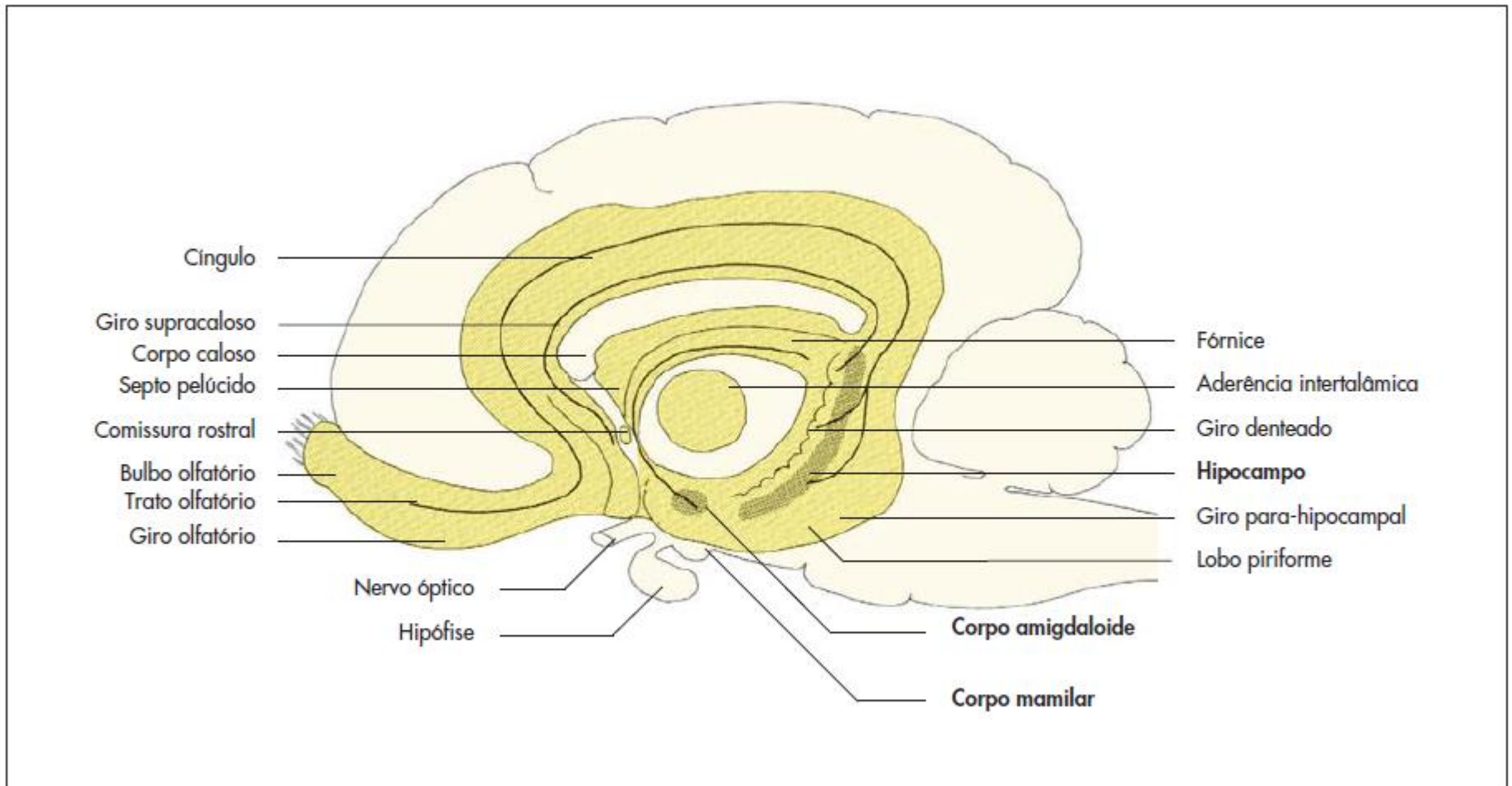
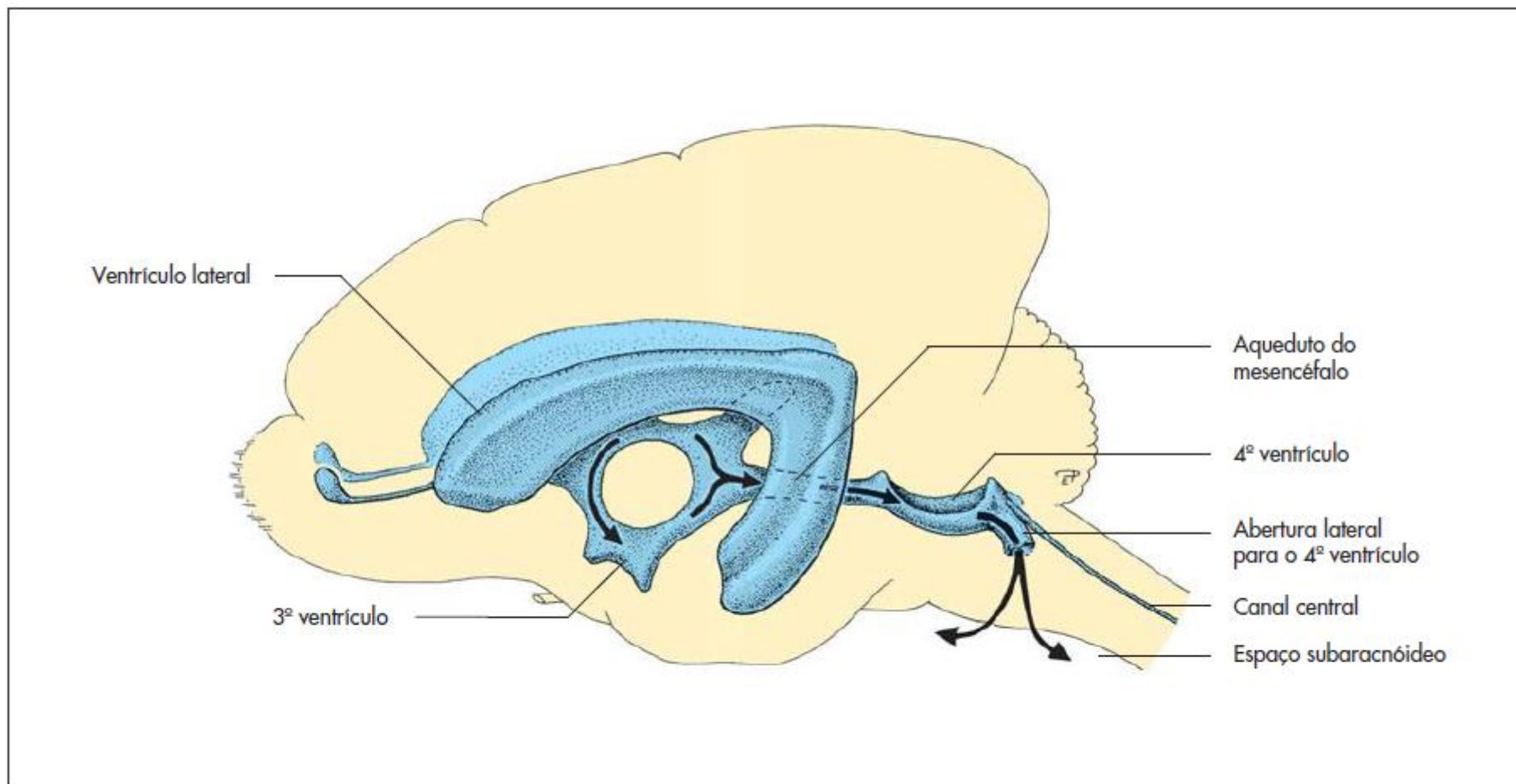


Figura 14-20 Sistema límbico (representação esquemática).



**Figura 14-40** Ventriculos cerebrais do cão, demonstrando o fluxo do líquido cefalorraquidiano (setas) (representação esquemática, vista lateral), segundo Anderson e Anderson, 1994.

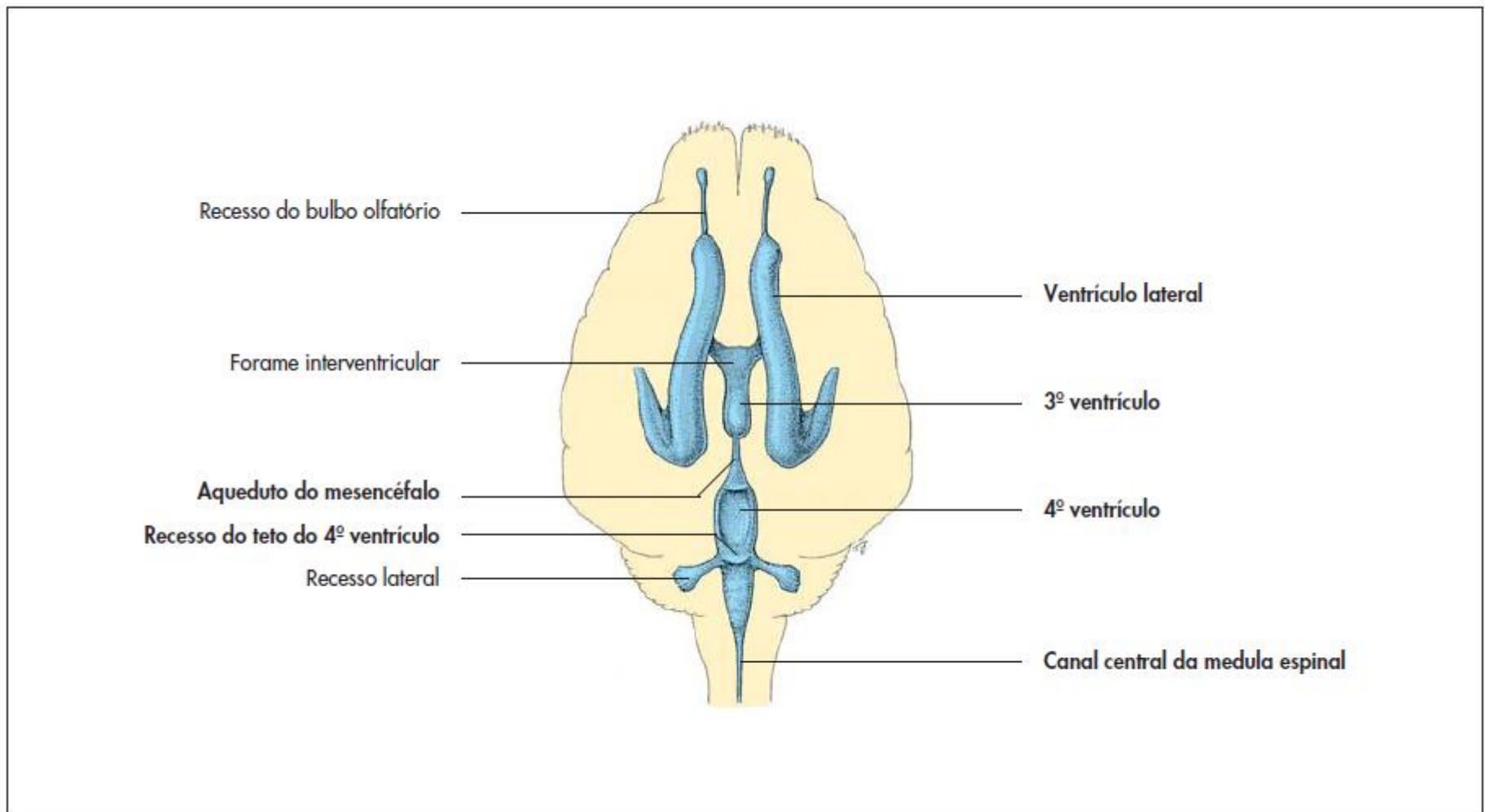


Figura 14-41 Ventrículos cerebrais do cão (representação esquemática, vista dorsal), segundo Anderson e Anderson, 1994.