

this strand is named the **medial longitudinal fasciculus**, and will be again referred to.

Gray Substance of the Medulla Oblongata (Figs. 694, 695).—In addition to the gracile and cuneate nuclei, there are several other nuclei to be considered. Some of these are traceable from the gray substance of the medulla spinalis, while others are unrepresented in it.

1. The **hypoglossal nucleus** is derived from the base of the anterior column; in the lower closed part of the medulla oblongata it is situated on the ventro-lateral aspect of the central canal; but in the upper part it approaches the rhomboid fossa, where it lies close to the middle line, under an eminence named the **trigonum hypoglossi** (Fig. 709). Numerous fibers connect the two nuclei, both nuclei send long dendrons across the midline to the opposite nucleus; commissure fibers also connect them. The nucleus measures about 2 cm. in length, and con-

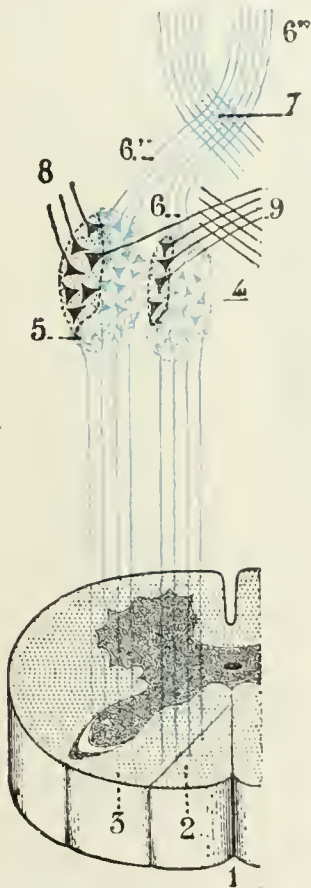


FIG. 692.—Superior terminations of the posterior fasciculi of the medulla spinalis. 1. Posterior median sulcus. 2. Fasciculus gracilis. 3. Fasciculus cuneatus. 4. Gracile nucleus. 5. Cuneate nucleus. 6, 6', 6''. Sensory fibers forming the lemniscus. 7. Sensory decussation. 8. Cerebellar fibers uncrossed (in black). 9. Cerebellar fibers crossed (in black). (Testut.)

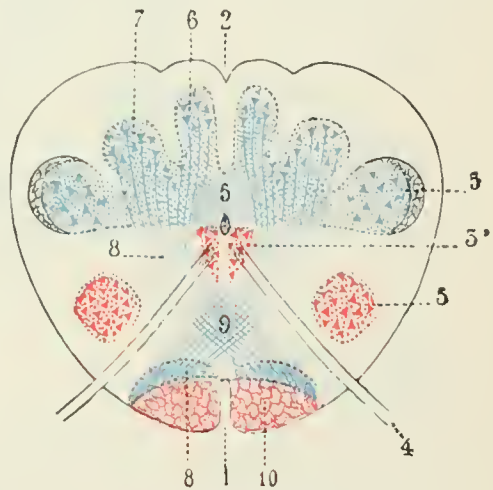


FIG. 693.—Transverse section passing through the sensory decussation. (Schematic.) 1. Anterior median fissure. 2. Posterior median sulcus. 3, 3. Head and base of anterior column (in red). 4. Hypoglossal nerve. 5. Bases of posterior columns. 6. Gracile nucleus. 7. Cuneate nucleus. 8, 8. Lemniscus. 9. Sensory decussation. 10. Cerebrospinal fasciculus. (Testut.)

sists of large multipolar nerve cells, similar to those in the anterior column of the spinal cord, whose axons constitute the roots of the hypoglossal nerve. These nerve roots leave the ventral side of the nucleus, pass forward between the white reticular formation and the gray reticular formation, some between the inferior olivary nucleus and the medial accessory olivary nucleus, and emerge from the antero-lateral sulcus.

2. The **nucleus ambiguus** (Figs. 696, 697), the somatic motor nucleus of the glossopharyngeal, vagus and cranial portion of the accessory nerves, is the continuation into the medulla oblongata of the dorso-lateral cell group of the anterior column of the spinal cord. Its large multipolar cells are like those in the anterior column of the cord; they form a slender column in the deep part of the formatio reticularis grisea about midway between the dorsal accessory olive and the nucleus of the spinal tract of the trigeminal. It extends from the level of the decussation of the median fillet to the upper end of the medulla oblongata. Its fibers first pass backward toward the floor of the fourth ventricle and then curve rather abruptly lateralward and ventrally to join the fibers from the dorsal nucleus.