

a great extent its epithelial nature, is expanded in a lateral direction. Later, by the growth and backward extension of the cerebellum, the roof is folded inward toward the cavity of the fourth ventricle; it assists in completing the dorsal wall of this cavity, and is also invaginated to form the ependymal covering of its choroid plexuses. Above it is continuous with the posterior medullary velum; below, with the obex and ligulæ.

The development of the *medulla oblongata* resembles that of the *medulla spinalis*, but at the same time exhibits one or two interesting modifications. On transverse section the myelencephalon at an early stage is seen to consist of two lateral walls, connected across the middle line by floor- and roof-plates (Figs. 647 and 648). Each lateral wall consists of an alar and a basal lamina, separated by an internal furrow, the remains of which are represented in the adult brain by the sulcus limitans on the rhomboid fossa. The contained cavity is more or less triangular

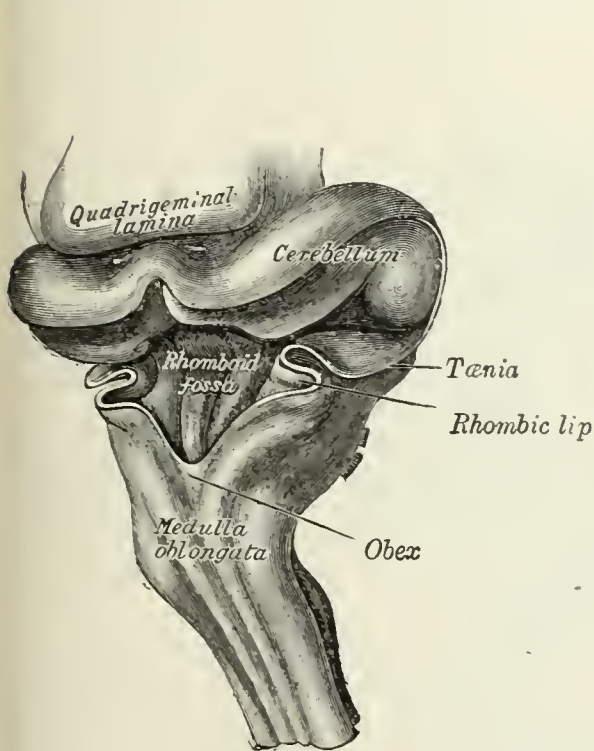


FIG. 649.—Hind-brain of a human embryo of three months—viewed from behind and partly from left side. (From model by His.)

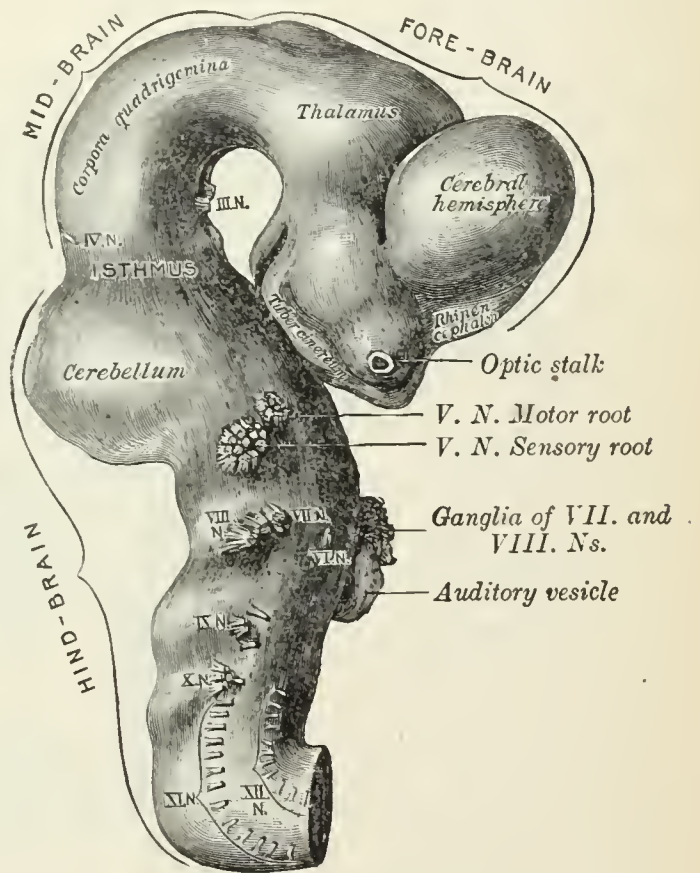


FIG. 650.—Exterior of brain of human embryo of four and a half weeks. (From model by His.)

in outline, the base being formed by the roof-plate, which is thin and greatly expanded transversely. Pear-shaped neuroblasts are developed in the alar and basal laminae, and their narrow stalks are elongated to form the axis-cylinders of the nerve fibers. Opposite the furrow or boundary between the alar and basal laminae a bundle of nerve fibers attaches itself to the outer surface of the alar lamina. This is named the *tractus solitarius* (Fig. 648), and is formed by the sensory fibers of the glossopharyngeal and vagus nerves. It is the homologue of the *oval bundle* seen in the *medulla spinalis*, and, like it, is developed by an ingrowth of fibers from the ganglia of the neural crest. At first it is applied to the outer surface of the alar lamina, but it soon becomes buried, owing to the growth over it of the neighboring parts. By the fifth week the dorsal part of the alar lamina bends in a lateral direction along its entire length, to form what is termed the *rhombic lip* (Figs. 648, 649). Within a few days this lip becomes applied to, and unites