

The **lateral preolivary** or **semilunar nucleus** lies ventral to the superior olivary nucleus. In it end terminals and collaterals of the trapezoid body and probably fibers of the opposite cochlear nucleus. Its axons mingle with the trapezoid body and join the lateral fillet.

The **mesial preolivary nucleus** is in contact with the ventral side of the nucleus of the trapezoid body. It receives many collaterals from the trapezoid body. Its cells are smaller than those of the trapezoid nucleus, their axons join the lateral fillet.

The **lateral lemniscus** (*lateral fillet*), the continuation upward of the central path of hearing, consists of fibers which come from the cochlear nuclei of the same and the opposite side by way of the trapezoid body and from the preolivary nuclei. It lies in the ventral or ventro-lateral part of the reticular formation of the pons, at first ventral then lateral to the median fillet. Above the pons these ascending fibers come to the surface at the side of the reticular formation in the trigonum lemnisci and are covered by a layer of ependyma. This part of the lateral lemniscus is known as the **fillet of Reil**. On reaching the level of the inferior colliculus the dorsal fibers which overlie the superior peduncle decussate in the *velum medullare anterius* with similar fibers of the opposite side. Numerous small masses of cells are scattered along the path of the lateral lemniscus above the superior olivary nucleus and constitute **lower and upper nuclei of the lateral lemniscus**. They are supplied with many collaterals and possibly terminals from the fibers of the lemniscus. The axons of the lower nucleus of the lateral lemniscus, which arise from the larger stellate or spindle-shaped cells, with long, smooth, much branched dendrites, are said by some authors to join the lateral lemniscus, but according to Cajal they pass medially toward the raphé; their termination is unknown. The cells of the upper nucleus of the lateral lemniscus are more scattered. The same uncertainty exists in regard to their termination.

The fibers of the lateral lemniscus end by terminals or collaterals in the inferior colliculus and the medial geniculate body. A few of the fibers are said to pass by the inferior colliculus to terminate in the middle portion of the stratum griseum of the superior colliculus, and are probably concerned with reflex movements of the eyes depending on acoustic stimuli.

The **inferior colliculi** (*lower or posterior quadrigeminal bodies*) are important auditory reflex centers. Each consists of a compact nucleus of gray matter covered by a superficial white layer and separated from the central gray matter about the aqueduct by a thin, deep, white layer. Many of the axons which appear in the superficial white layer ascend through the inferior brachium to the medial geniculate body. Others mainly from large cells in the dorso-mesial part of the nucleus pass through the deep white layer into the tegmentum of the same and the opposite side and descend. Their termination is unknown, but they probably constitute an auditory reflex path to the lower motor centers, perhaps descending into the spinal cord with the tectospinal fasciculus. Other axons are said to descend in the lateral lemniscus to the various nuclei in the auditory path (Held) and probably to motor nuclei of the medulla and spinal cord.

The **medial geniculate body** receives terminals and collaterals from the lateral lemniscus (the central auditory path) and also large numbers of axons from the inferior colliculus of the same side and a few from the opposite side. It is thus a station in the central auditory path. A large proportion of its axons pass forward beneath the optic tract to join the corona radiata and then sweep backward and lateralward as the auditory radiation to terminate in the cortex of the superior temporal gyrus. V. Monakow holds that Golgi cells type II are interpolated between the terminations of the incoming fibers to the medial geniculate body and the cells located there which give rise to the fibers of the auditory radiation. The medial geniculate bodies are united by the long, slender **commissure of Gudden**. These