Internal arcuate fibers

The internal arcuate fibers or internal arcuate tract is the axons of second-order sensory neurons that compose the gracile and cuneate nuclei of the medulla oblongata. These second-order neurons begin in the posterior grey column in the spinal cord. They receive input from first-order sensory neurons, which provide sensation to many areas of the body and have cell bodies in the dorsal root ganglia of the dorsal root of the spinal nerves. Upon decussation (crossing over) from one side of the medulla to the other, also known as the sensory decussation, they are then called the medial lemniscus.

The internal arcuate fibers are part of the second-order neurons of the posterior column-medial lemniscus system and are important for relaying the sensation of fine touch and proprioception to the thalamus and ultimately to the cerebral cortex.