

Lateral longitudinal striae

In the eighteenth century, [Giovanni Maria Lancisi](#) described the [indusium griseum](#) (IG) and the [longitudinal striae](#) (LS) of the [corpus callosum](#).

The [indusium griseum](#) is a thin layer of [grey matter](#) which covers the superior surface of the [corpus callosum](#), extending from the [paraterminal gyrus](#) anteriorly to the [dentate gyrus](#) and [hippocampus](#) posteriorly via the [gyrus fasciolaris](#).



Figure from 3Dneuroanatomy.com

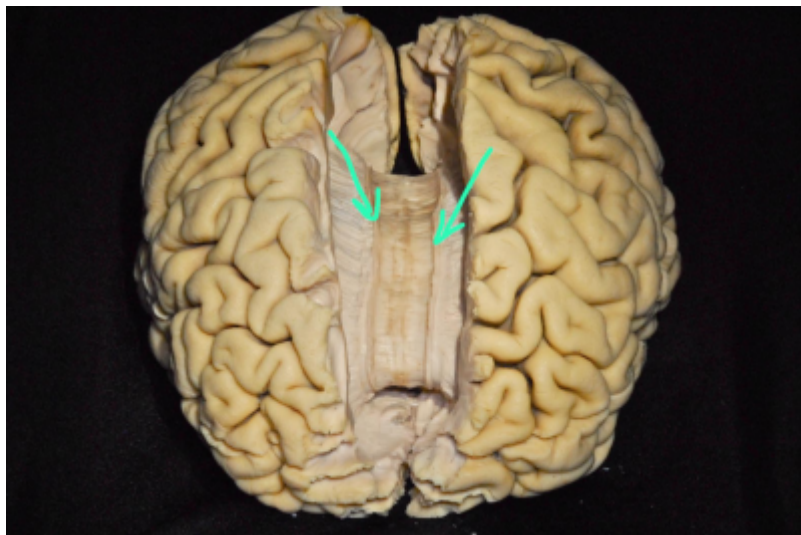
The medial longitudinal striae (nerves of Lancisi) and [lateral longitudinal striae](#) are two pairs of myelinated [fiber](#) bands found in the [gray matter](#) of the IG on the dorsal aspect of the [corpus callosum](#). Embryologically, the IG and LS are dorsal remnants of the [archicortex](#) of the [hippocampus](#) and [fornix](#) and thus they are considered components of the [limbic system](#).

Studies using [immunohistochemistry](#) reported that [acetylcholine](#), [dopamine](#), [noradrenaline](#), [5-hydroxytryptamine](#) and [GABA](#) neurons innervate the IG. Newer imaging techniques, such as high field MRI and diffusion tensor imaging, provide new tools for studying these structures, whose true function remains still unclear.

Di Ieva in a paper of 2014, reviews the history of the discovery of the IG and LS of the [corpus callosum](#), with a [holistic](#) overview on these interesting structures from the anatomical, embryological, neurochemical, radiological and clinical perspective ¹⁾.

It continues laterally with the grey matter of the [cingulate gyrus](#).

It contains two longitudinally directed strands of fibers termed respectively the medial and [lateral longitudinal striae](#) (of Lancisi) on each side.



1)

Di Ieva A, Fathalla H, Cusimano MD, Tschabitscher M. The indusium griseum and the longitudinal striae of the corpus callosum. *Cortex*. 2015 Jan;62:34-40. doi: 10.1016/j.cortex.2014.06.016. Epub 2014 Jul 8. Review. PubMed PMID: 25091482.

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