

The description of human white matter [pathways](#) experienced a tremendous improvement, thanks to the advancement of [neuroimaging](#) and [dissection](#) techniques. The downside of this progress is the production of redundant and conflicting [literature](#), bound by specific studies' methods and aims. The [Superior Longitudinal System](#) (SLS), encompassing the [arcuate](#) (AF) and the [superior longitudinal fasciculi](#) (SLF), becomes an illustrative example of this fundamental issue, being one of the most studied white matter association pathways of the brain. Vavassori et al. provided a complete illustration of this white matter fiber system's current definition, from its early descriptions in the nineteenth century to its most recent characterizations. They proposed a review of both [in vivo diffusion magnetic resonance imaging](#)-based [tractography](#) and anatomical dissection studies, enclosing all the information available up to date. Based on these findings, they reconstructed the wiring diagram of the SLS, highlighting a substantial variability in the description of its cortical sites of termination and the taxonomy and paratomy that characterize the system. They aimed to level up discrepancies in the [literature](#) by proposing a parallel across the various [nomenclature](#). Consistent with the topographical arrangement already documented for commissural and projection pathways, they suggested approaching the SLS organization as an orderly and continuous wiring [diagram](#), respecting a medio-lateral palisading [topography](#) between the different [frontal](#), [parietal](#), [occipital](#), and [temporal gyri](#) rather than in terms of individualized fascicles. A better and complete description of the fine organization of [white matter](#) association pathways' [connectivity](#) is fundamental for a better understanding of brain function and their clinical and neurosurgical applications ¹⁾.

1)

Vavassori L, Sarubbo S, Petit L. Hodology of the superior longitudinal system of the human brain: a historical perspective, the current controversies, and a proposal. *Brain Struct Funct.* 2021 Apr 21. doi: 10.1007/s00429-021-02265-0. Epub ahead of print. PMID: 33881634.

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