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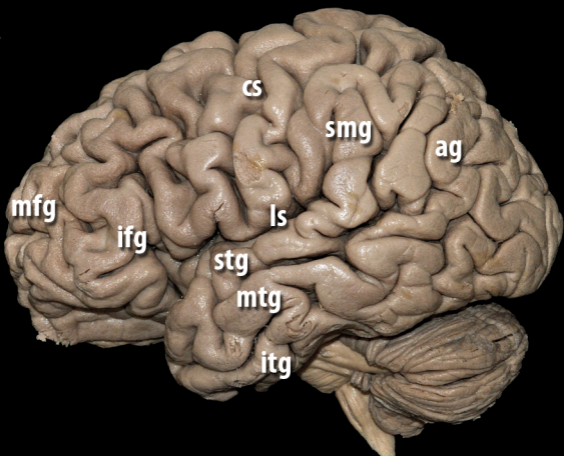
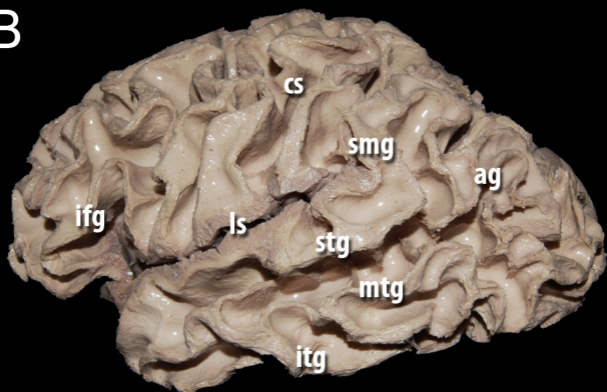
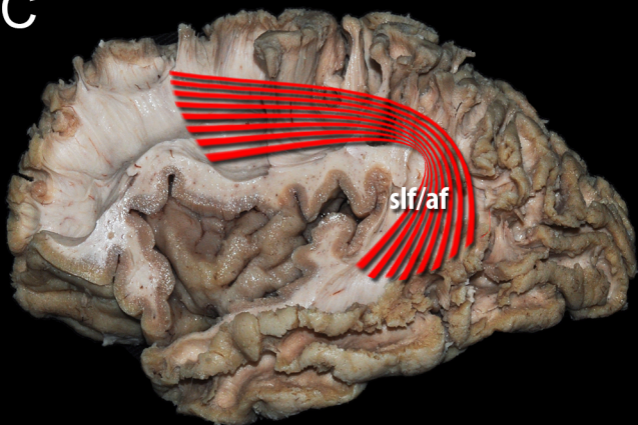
## **Supplemental material**

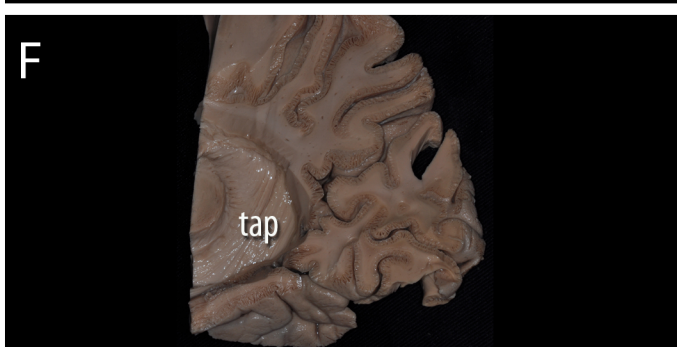
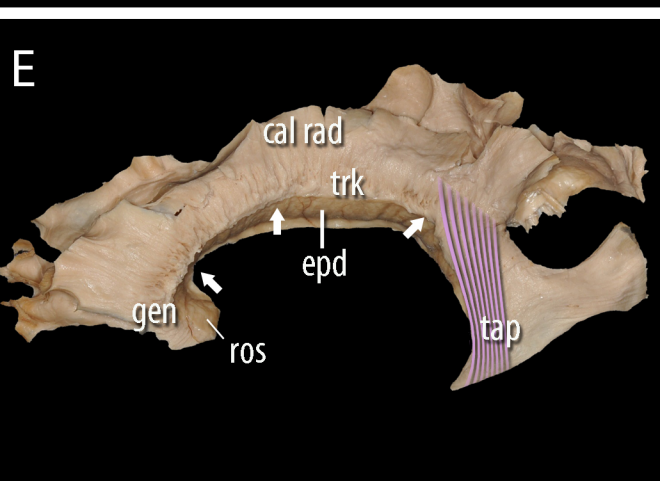
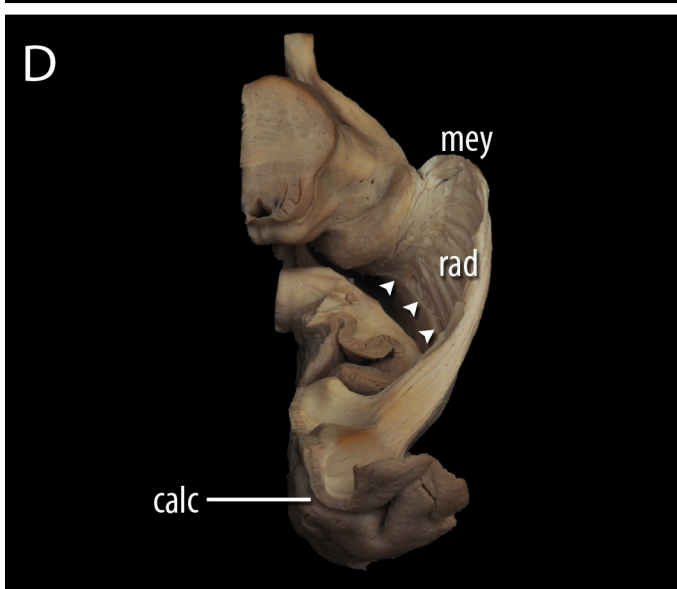
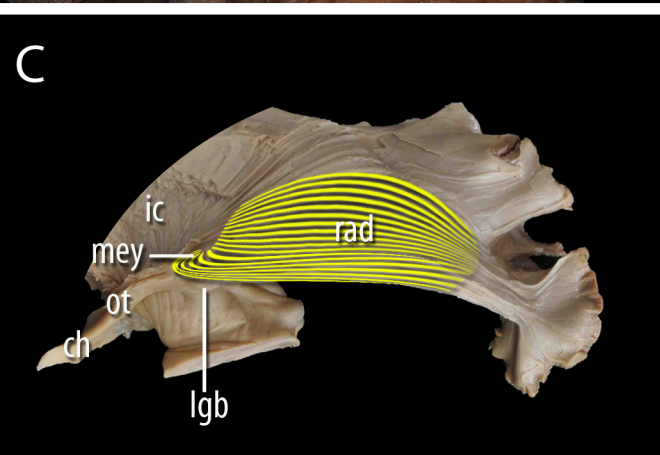
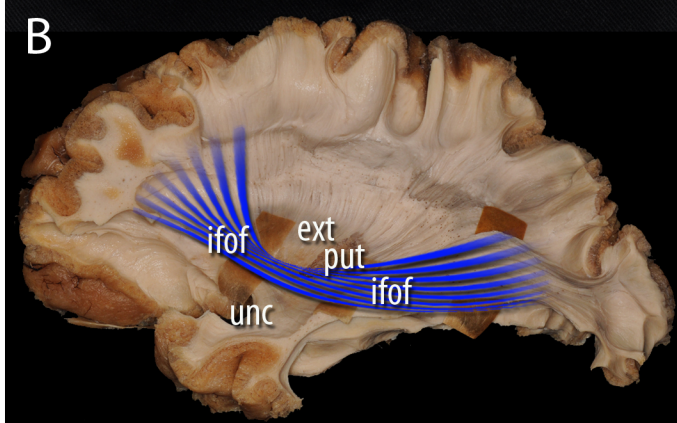
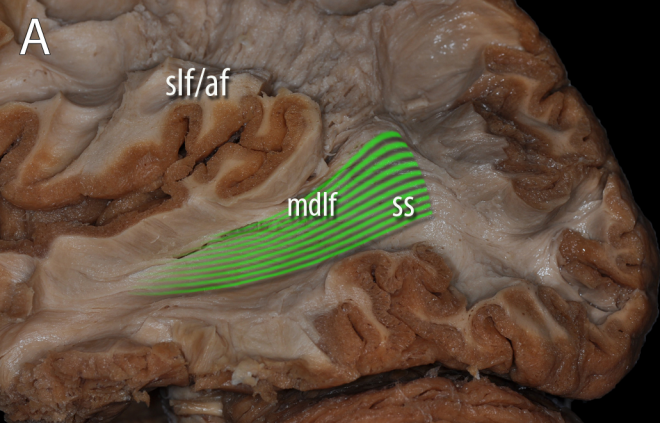
### **Composition and organization of the sagittal stratum in the human brain: a fiber dissection study**

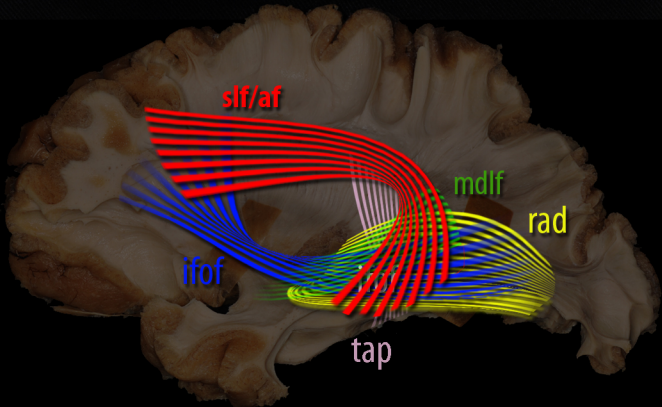
Maldonado et al.

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**A****B****C**





**Supplementary Fig. 1.** Superficial dissection. **A.** A human cerebral specimen prepared for fiber dissection using a variant of the Klingler method. The gray matter was dark and friable due to freezing. **B.** Subcortical white matter containing short “U” association fibers. Delicate removal of the cerebral cortex exposes this layer of white matter at the depth of all sulci. It is smooth in the depth, but rough at the top of each gyri given the richness of fiber terminations. **C.** Exposure of the posterior part of the superior longitudinal fasciculus/arcuate fasciculus (*slf/af*) complex (red lines). *ag*, angular gyrus; *cs*, central sulcus; *ifg*, inferior frontal gyrus (triangular portion); *itg*, inferior temporal gyrus; *ls*, lateral sulcus; *mfg*, middle frontal gyrus; *mtg*, middle temporal gyrus; *smg*, supramarginal gyrus; *stg*, superior temporal gyrus.

**Supplementary Fig. 2.** Progressive exposure and dissection of the white matter fasciculi that run in the sagittal stratum (*ss*), medial to the superior longitudinal / arcuate fasciculus (*slf/af*). **A.** Middle longitudinal fasciculus (green lines), lateral view (*mdlf*). Exposure of the outermost layer of the *ss* after ablation of the elements of the *slf/af* complex, which is lateral to it, and before removal of the anterior temporal lobe. *mdlf* fibers do not plunge into the deep parts of the temporal lobe as do the inferior fronto-occipital fasciculus (*ifof*) and optic radiations (*rad*). They remain relatively superficial and penetrate the white matter of the temporal operculum (reference 17, re-use permission). **B.** Lateral view. The *ifof* (blue lines) is made of anterior and posterior segments linked by a narrower trunk. The uncinata (*unc*) fasciculus is ventral to the *ifof* trunk, and both constitute the ventral part of the external and extreme capsules. Dorsal to the *ifof* trunk, the dorsal part of the external capsule (*ext*) laterally limits the putamen (*put*) . **C.** Lateral view, deeper dissection showing, from anterior to posterior: optic chiasm (*ch*), optic tract (*ot*) turning around the crus cerebri continuing the internal capsule (*ic*), and lateral geniculate body (*lgb*) and optic radiations (*rad*). The latter runs within the internal layer of the *ss*, deep to the *mdlf* and *ifof* before reaching the lips of

the calcarine fissure in the occipital lobe. Meyer's loop (*mey*) is the anterior part of the *rad* (yellow lines). **D.** Inferior view on the same specimen as in C; the lateral ventricle was widely open, and the dissection was performed from within its cavity; the ependyma was first removed followed by the tapetum, a thin layer of fibers roughly vertically oriented. The optic chiasm (*ch*), optic tract (*ot*), lateral geniculate body (*lgb*) and pulvinar (*pul*) are exposed. Further posteriorly and medially, the splenium of the corpus callosum (*spl*) was sectioned on the midline. Fibers of the optic radiations (*rad*), which are part of the posterior thalamic radiations, reached the calcarine fissure (*calc*). They ran in the medial aspect of the occipital lobe, as well as their recurrent path around the temporal horn of the lateral ventricle, forming the temporal (Meyer's) loop (*mey*). **E.** Dissection of the corpus callosum, lateral view (different specimen as in C and D). The corpus callosum was isolated from the projection fibers and thus from the lateral wall of the majority of the ventricular cavity in a specimen where the two hemispheres were not dissociated. The rostrum (*ros*), genu (*gen*), body (*trk*) and dorsal callosal radiations (*cal rad*) were exposed. The splenium is not visible in this view because it is hidden by the tapetum (pink lines, *tap*), which covers the wall of the atrium and part of the occipital horn. Dissection of the corpus callosum from the projection fibers and from the lateral wall of the frontal horn and body of the lateral ventricle imposes the section of a great number of ventral and rostral *cal rad*, which were intermingled with the fibers of the corona radiata. They were removed together with the corona radiata during removal of the lateral wall of the frontal horn and the body of the ventricle. This is the reason for the dotted cut-off appearance of the callosal white matter all along the region that corresponds to the roof of the lateral ventricle (arrows). Finally, the ependyma (*epd*) is seen under the body of the corpus callosum at the level of the roof of the lateral ventricle. **F.** Medial view of the lateral wall of the ventricular atrium after a parasagittal section and removal of the ventricular

ependyma. The tapetum (*tap*) fibers are vertically arranged between the ependyma and posterior thalamic radiations/optic radiations.

**Supplementary Fig. 3.** General disposition of long white matter fasciculi in the lateral wall of the ventricular atrium. All long fasciculi are represented with colored lines: *red*, superior longitudinal fasciculus/arcuate fasciculus complex (slf/af); *green*, middle longitudinal fasciculus (mdlf); *blue*, inferior fronto-occipital fasciculus (ifof); *yellow*, optic radiations (rad); *pink*, tapetum (tap).