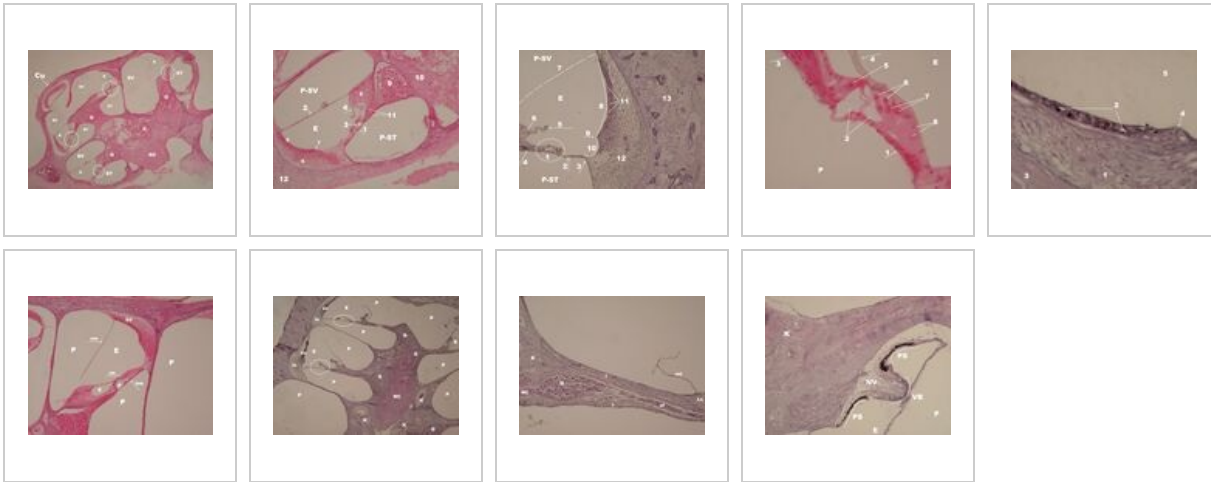
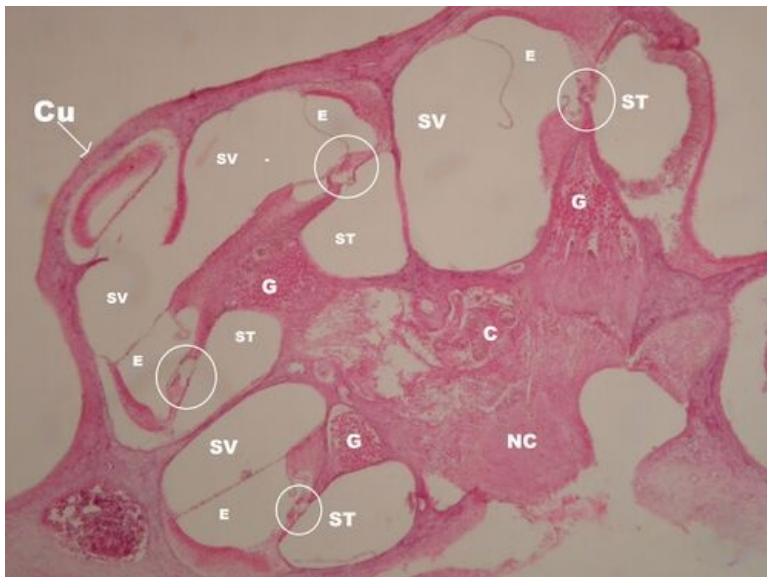


Organum vestibulocochleare (SFLT)

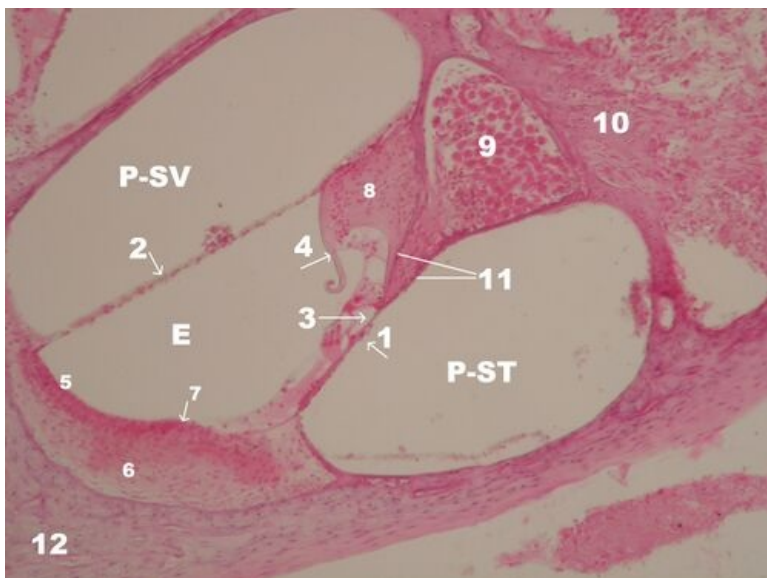


Cochlear Section - Overview (HE)



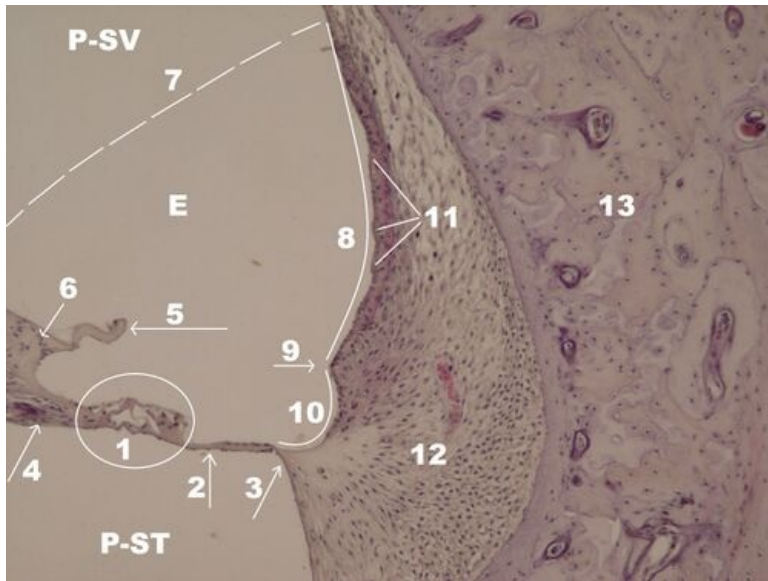
Description: C – blood vessels, Cu – cochlea cupula, E – endolymphatic space = ductus cochlearis (scala media), G – ganglion cochleare, NC – nervus cochlearis, perilymphatic spaces: ST – scala tympani, SV – scala vestibuli.

Cross-section through one turn of the cochlea - detail of the previous preparation (HE)



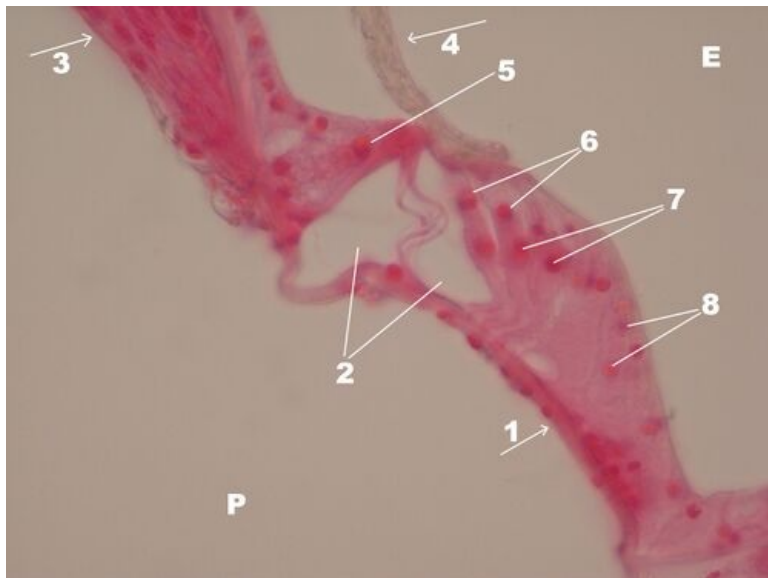
Description: 1 - membrana basilaris, 2 - membrana vestibularis Reissneri, 3 - tunnel spaces of Corti, 4 - membrana tectoria, 5 - stria vascularis, 6 - ligamentum spiralis, 7 - prominentia spiralis, 8 - limbus spiralis, 9 - ganglion cochleare, 10 - efferent nerve fibers from ganglion cochleare, future nervus cochlearis, 11 - lamina spiralis ossea, 12 - bony cochlea, E - endolymphatic space = ductus cochlearis (scala media), P - perilymphatic space: ST - scala tympani and SV - scala vestibuli.

Ductus cochlearis (scala media) - detail (HE)



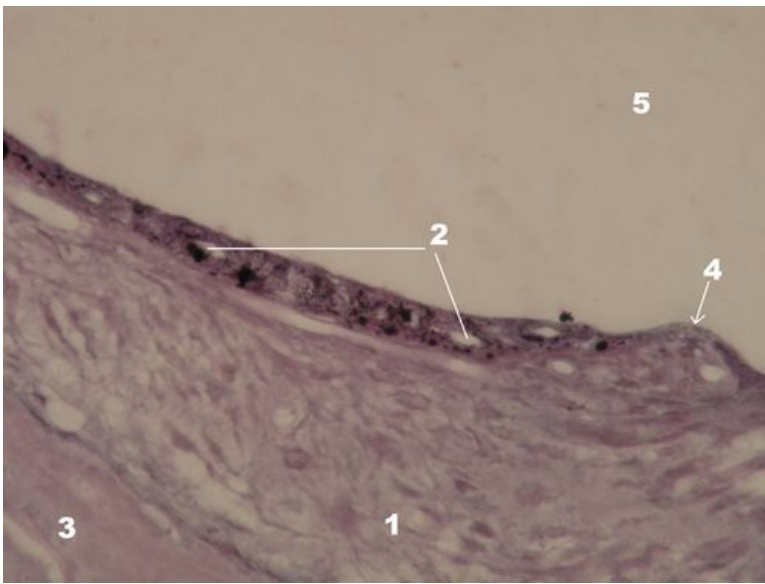
Description: 1 - organ of Corti, 2 - membrana basilaris, 3 - crista spiralis, 4 - lamina spiralis ossea, 5 - membrana tectoria, 6 - limbus spiralis, 7 - dashed line represents the membrana vestibularis Reissneri, which was not preserved in this preparation, 8 - stria vascularis, 9 - prominentia spiralis, 10 - sulcus spiralis externus, 11 - capillaries in the stria vascularis (the stria vascularis of the inner ear is the only epithelium with blood vessels, otherwise the epithelium is avascular tissue), 12 - ligamentum spirale, 13 - bony cochlea, E - endolymphatic space = ductus cochlearis (scala media), P - perilymphatic space: ST - scala tympani, SV - scala vestibuli.

Organ of Corti - detail (HE)



Description: 1 - membrana basilaris, 2 - tunnel spaces in the organ of Corti, 3 - lamina spiralis ossea containing afferent nerve fibers from the ganglion cochleare, 4 - membrana tectoria, 5 - inner hair cell, 6 - outer hair cells, 7 - outer phalanx cells, 8 - other supporting cells, E - endolymphatic space = ductus cochlearis (scala media), P - perilymphatic space of scala tympani.

Stria vascularis of the inner ear - an example of epithelium with a vascular supply (HE)



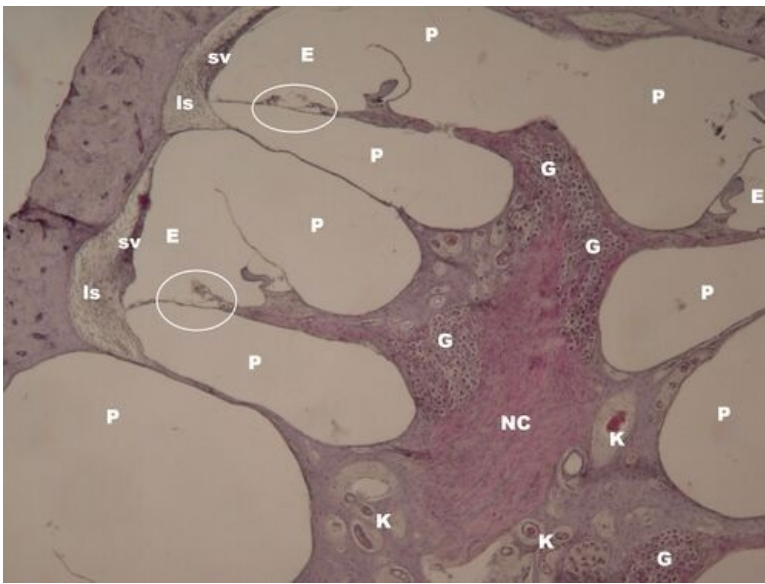
Description: 1 - ligamentum spiralis, 2 - capillaries in stria vascularis, 3 - bony cochlea, 4 - prominentia spiralis, 5 - lumen of scala media (= ductus cochlearis).

Cochlear - spaces and structures related to endolymph and perilymph (HE)



Description: E - endolymphatic space, P - perilymphatic space, p - perilymph in the tunnel of Corti, SV - stria vascularis produces endolymph, bm - basilar membrane (does not have a barrier function, therefore there is also perilymph in the tunnel of Corti), rm - reticular membrane (barrier endolymph in the scala media - perilymph in the tunnel of Corti), Reissner's vestibular membrane (endolymph barrier in the ductus cochlearis - perilymph in the scala vestibuli).

Section through the cochlea - course of ganglia and nerves (overview, HE)



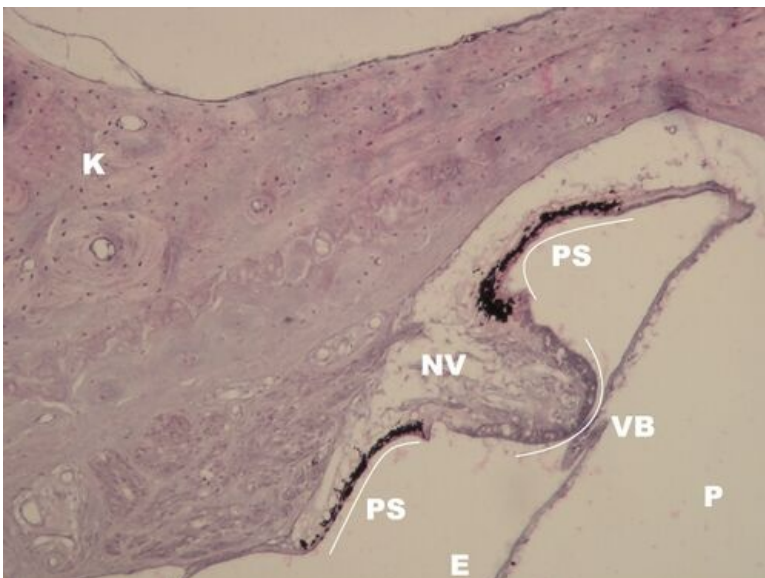
Description: E – endolymph, P – perilymph, K – bony cochlea (fibrous bone), G – ganglion cochleare, NC – nervus cochlearis, Is – ligamentum spirale, sv – stria vascularis, in ovals – organs of Corti

Ganglion spirale – detail (HE)



Description: I – lamina spiralis ossea has two strips between which afferentation takes place, af – afferent nerve fibers from ganglion cochleare to hair cells, G – ganglion cochleare, NC – nervus cochlearis, K – bony cochlea (fibrous bone), Ls – limbus spiralis, mt – tectorial membrane.

Vestibular apparatus - crista ampullaris detail (HE)



Description: E – endolymph, P – perilymph, VB – hair cells of the vestibular apparatus, PL – planum semilunare (dark) forms the endolymph, NV – nerve fibers of the future vestibular nerve, K – bony labyrinth.

Sense organs

- Pars olfactoria mucosae nasi (SFLT)
- Organum vestibulocochleare (SFLT)
- Bulbus oculi (SFLT)
- Nervus opticus (SFLT)
- Muscle spindle (SFLT)

Links

- Histology atlas (3. LF UK)