**Movie S1.** Tomographic reconstruction and 3D model of an endothelial tight junction in the MPOA of intact male mice.

**Movie S2.** Tomographic reconstruction and 3D model of an endothelial tight junction in the MPOA of castrated male mice.

**Figure S3:** Depletion of gonadal testosterone induced IgG extravasation and glial activation in the mouse cortex.

Representative images of co-immuno-detection of circulating IgG (red) and Iba-1 (green) in the neocortex of intact (left panel) and castrated mice (right panel). Scale bar=  $40 \,\mu m$ . L: lumen Endogenous IgG are observed in the capillary wall and associated with microglial cells in the cerebral parenchyma of perfused-castrated mice (right panel), whereas low labelling is detected in perfused-intact mice (left panel).

## Supplementary Information - Figure S3

