Figure 2

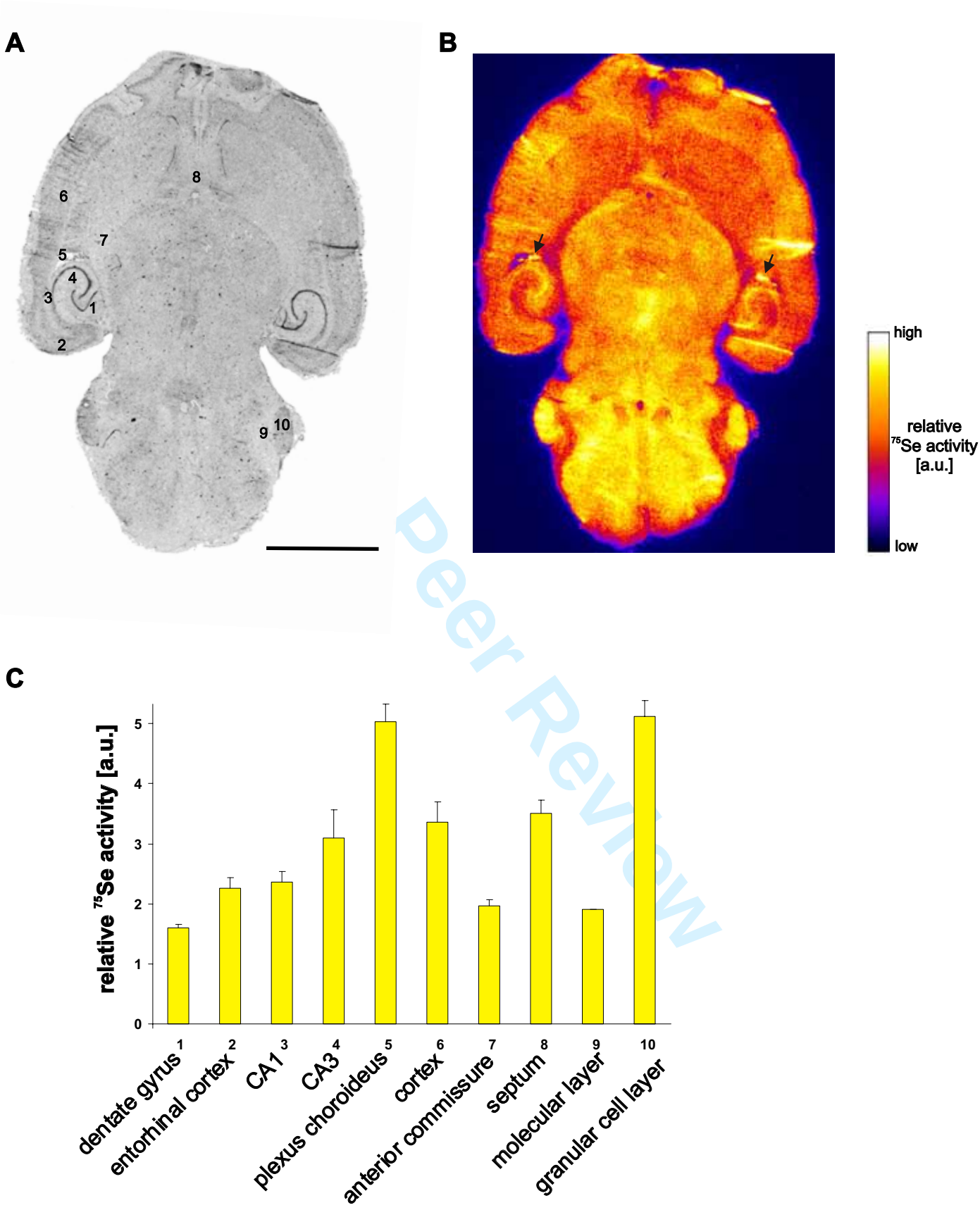

Figure 2: Neurochemical imaging and analysis of selenium distribution in the brain. Quantitative autoradiographic evaluation of brain sections from selenium-adequate (Se+) and selenium deficient rats (Se-). ***A***, Photomicrograph of a horizontal brain section from a selenium deficient rat, labeled for seven days with ^{75}Se. The Nissl staining was applied after the autoradiographic procedure. Numbers indicate areas of quantitative evaluation. ***B***, Autoradiogram of the same sample. The color code bar illustrates the coding scheme for the ^{75}Se activity. Scale bar represents 5 mm. ***C***, Quantitative analysis of the ^{75}Se activity per area in 10 distinct brain regions of selenium deficient and adequate rats. Note, that especially neuron rich areas (grey matter) such as CA1-3, septum and cortex are enriched in selenium accumulation. Choroid plexus and granule cell layer in the cerebellum give highest signals. The values are expressed as percentage of relative ^{75}Se activity/area (mean ± SD). Scale bar represents 5mm.