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*Receptor expression in the human and macaque monkey brain: different but comparable*

Transmitter receptors are key molecules of signal processing in the nervous system. They show a considerable regional heterogeneity in their expression between cortical and subcortical regions. Previous studies of post mortem human brains have shown that the analysis of numerous receptors of different transmitter systems within each brain region provides a characteristic “receptor fingerprint”, which reveals the quantitative relations between the densities of excitatory, inhibitory and modulatory receptors expressed in that brain region. Furthermore, a receptor fingerprint is not only characteristic for the structurally or functionally defined cortical area, but also for functional networks. I.e., all areas belonging to a defined functional network exhibit similar fingerprints, which are different from those of other networks. Here, the multi-receptor expression in cytoarchitectonically sites in the human and macaque monkey brain will be demonstrated. Furthermore, the degree of similarity of those receptor fingerprints will be examined with hierarchical cluster and principal component analyses to reveal organizational principles in the brains of each of these species at the molecular level.