

Trichromacy is the condition that involves three independent channels for processing color information based on three different cone types. Most mammals have dichromatic vision, trichromacy appears in primates of the Old World (including human) and partly in the New World primates. This thesis focuses on the mechanisms of trichromatic vision, its evolution in primates and the comparison of the primates of the Old and New World. The neuronal mechanisms underlying both trichromatic and dichromatic vision will be discussed, however we focus particularly on the potential hypothesis for the evolution of trichromatic color vision in primates.