**General Discussion**

**Comparison with results from other species**

Superior colliculus neurons of cats are binocular and highly direction selective, but not orientation selective. Superior colliculus of macaques has a much smaller proportion of direction selective cells (10% compared to 75% in cats). These cells are also not orientation selective. These studies were often conducted with thick bars and if the receptive field properties had been studied with thinner bars or at higher spatial frequencies, orientation biases may have been found. Most neurons in the tree shrew superior colliculus in our sample were not direction selective. Infact, even in the geniculo-cortical system, very few direction selective neurons have been reported. In our study, using the same method used by Van Hooser et al., 2013, none of the measured units were direction selective. When the direction selectivity index, a less conservative measure of direction selectivity and the method used in the macaque study (Goldberg & Wurtz, 1972), was calculated, about 20% of our neurons were direction tuned. Direction selectivity in tree shrews, is more similar to the macaque superior colliculus rather than the cat superior colliculus.