

INTERLEUKIN RECEPTORS NEAR THE SUPRACHIASMATIC NUCLEUS

David A. Garcia, Department of Biology

Faculty Sponsor: Dr. Robert Gannon, Department of Biology

Many groups of cytokine receptors exist, but one group of interest is the interleukins. Three interleukin antibodies (IL-1, IL-6, and IL-15) were tested to determine if these receptors are located in the suprachiasmatic nucleus (SCN) of ventral hypothalamus. Cells within the SCN are responsible for controlling mammalian circadian rhythms. Frontal sections of a hamster brain were cut and sections containing the SCN region were prepared for staining using an ABC kit and the antibody of interest at a particular dilution. The sections were stained and mounted onto slides to be examined. Results showed that IL-1 receptors stained in the hippocampus and the paraventricular hypothalamic nucleus. IL-6 receptors stained in the paraventricular hypothalamic nucleus and in the regions immediately above the third ventricle. IL-15 receptors stained diffusely over the entire section but particularly in the paraventricular hypothalamic nucleus and the hippocampus. None of the antibodies showed staining in the SCN region.