

## **CHANGES OF NOREPINEPHRINE LEVELS AND RELEASE IN RAT CEREBRAL-CORTEX DURING THE ESTROUS-CYCLE**

Parada, S., Galleguillos, X., Forray, M. I., & Belmar, J. (1991). Changes of norepinephrine levels and release in rat cerebral cortex during the estrous cycle. *Neuroreport*, 2(12), 801-804.

### **Abstract**

We studied the influence of the estrous cycle and ovariectomy on the noradrenergic innervation of the rat cerebral cortex. The lowest norepinephrine (NE) concentration was found during estrus in frontal and occipital cortex. At that stage and at diestrus-2, 20 mM K<sup>+</sup> induced the lowest release of [3H]NE from occipital region slices, and the highest release was found at 60 mM K<sup>+</sup>. Ovariectomy (7 days) decreased the 20 mM K<sup>+</sup> effect. Yohimbine (10 x 10<sup>-6</sup> M) increased the induced NE release through the cycle but its effects disappeared after ovariectomy. In the frontal cortex the drug effect was only found at diestrus-1 and no changes were observed in the K<sup>+</sup> effect through the cycle. Results suggest that normal endocrine influences can modify noradrenergic neurotransmission in the rat cerebral cortex.