



IMMUNOHISTOCHEMICAL INVESTIGATION OF THE ACTIVATION EFFECTS OF URIDINE AND ITS NUCLEOTIDES ON NEUROENDOCRINE NEURONS

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GRADUATION DATE:26.12.2023

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KEY WORDS

- ✓ Uridine
- ✓ P2Y Receptor
- ✓ Immunohistochemistry
- ✓ Neuronal Activation
- ✓ c-Fos

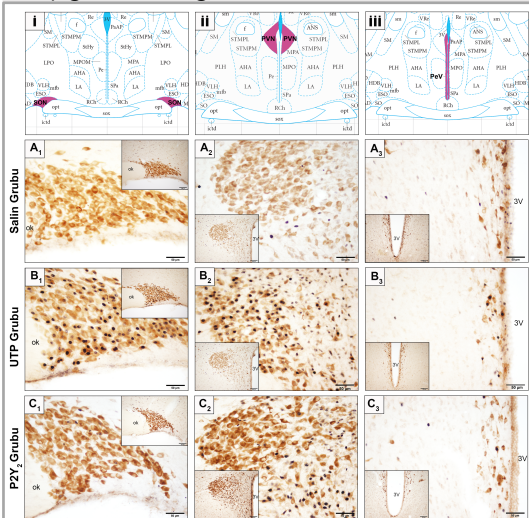
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THESIS ABSTRACT

In the thesis study, the activating effects of uridine and uridine nucleotides uridine monophosphate (UMP), uridine diphosphate (UDP), uridine triphosphate (UTP) administered intracerebroventricularly (i.s.v.) on vasopressin, oxytocin and nesfatin-1 neurons and the use of receptor antagonists in this effect. It was aimed to evaluate its possible suppressive role. It was shown that the effect of UTP, which showed the highest increase in activation in all neuron groups, was suppressed by pre-application of P2Y2 receptor antagonist. The presence of P2Y2 was determined in all neuron types by double immunofluorescence staining. As a result, it was suggested that UTP may activate neurons by binding to the P2Y2 receptor localized in vasopressin, oxytocin and nesfatin-1 neurons.

APPLICATION AREAS OF THE THESIS RESULTS

It was defined the UTP/P2Y2 relationship as a regulator of nesfatin-1, vasopressin and oxytocin neurons, which have many peripheral and central effects. It revealed the need to pursue agonists and antagonists for this GPCR as targets in the treatment of related diseases.

ACADEMIC ACTIVITIES

Hasanoğlu-Akbulut, N., Koç, C., Salman, B., Çoşkan, N., Ermiş, E. Topal G., Eyigör, Ö., & Cansev, M., (2023). Merkezi yolla uygulanan üridin trifosfat ve reseptör antagonisinin nesfatin-1 nöronlarının aktivasyonu üzerine etkileri. (2023). 21. Ulusal Sinirbilim Kongresi, ss.210. Bolu, Türkiye.

Hasanoğlu-Akbulut, N., Koç, C., Salman, B., Topal G., Çoşkan, N., Ermiş, E., Cansev, M., & Eyigör, Ö. M. (2023). Merkezi yolla uygulanan üridin trifosfat ve p2y2 reseptör antagonisinin vazopressin ve oksitosin nöronlarının aktivasyonu üzerine etkileri. 26. Ulusal Elektron Mikroskopi Kongresi, ss.81. Eskişehir, Türkiye.

TOA-2021-684- Bursa Uludağ Üniversitesi BAP