an activating signal (as ATP), which promotes the formation of the complex.

**Methods:** Organotypic slices were used to assess the interplay between inflammation and epilepsy. Slices were exposed to different concentrations of LPS (5, 10 and 20 ng/mL), either alone or in the presence of ATP (1 mM). LPS-induced inflammation was characterized using molecular-based assays, such as ELISA to quantify IL-1β, CBA to measure TNF-α, and western blot to assess the expression of Iba-1, GFAP, NLRP3/ASC, and αII-Spectrin. Field potential recordings were used to evaluate the epileptic-like activity of the slices and the effect of MCC950, a NLRP3 selective inhibitor,[2] was assessed.

**Results:** Results obtained by ELISA showed a significant increase in IL-1β concentration in slices exposed to 10 ng/ml LPS/1 mM ATP. TNF-α, assessed by CBA, was also significantly increased in this condition, corroborating the inflammatory phenotype. No changes in NLRP3 expression were observed by immunoblot analysis, but ASC, one component of the inflammasome, showed a decreased expression in LPS/ATP exposed slices, suggestive of its binding to NLRP3 and thus to complex formation.

Furthermore, epileptic-like activity, measured by field potential recordings, was blocked by MCC950 (10 μM).

**Conclusion:** We demonstrate that LPS induces an inflammatory phenotype in organotypic slices. NLRP3 blockade eliminated the epileptic-like activity of the slices.

## References

1. Walsh JG, Muruve DA, Power C. Inflammasomes in the CNS. Nat Rev Neurosci. 2014;15:84–97.
2. Coll RC, Robertson AAB, Chae JJ, et al. A small-molecule inhibitor of the NLRP3 inflammasome for the treatment of inflammatory diseases. Nat Med. 2015;21:248–55.

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**PS110**

## Study of the modulatory CNS regions in the visual circuit Retina-Superior Colliculus-Lateral Posterior nucleus triggering freezing behavior

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**Aim:** The goal is to understand the neuronal networks organization from the sensory input to the freezing behavior through the identification of modulatory brain regions that project to the Superior Colliculus.

**Introduction:** The behavior of an animal can be triggered by signals in its visual environment. Threating visual stimulus evoked innate defense behaviors as freezing behavior. This project is focused in one visual-guided behavioral circuit that links the retina visual information with the Lateral Posterior thalamic nucleus(LP) via Superior Colliculus(SC).

**Methods:** The experimental approach is based on retrograde viral tracing techniques. Using the stereotaxic surgery, the first injection with a Herpes Simplex Virus expressing TVA receptor and glycoprotein G was done at LP. After 21 days, the second injection was done at the SC with a Rabies Virus coated by EnvA and lacking of glycoprotein G. The combination of these viruses allowed the restriction of the viral tracing to the circuit of interest. Subsequently, the experimental procedure continued perfusing the mouse, slicing the brain and staining it. Finally, the slices were scanned using the fluorescent confocal microscope.

**Results:** The resulting images presented labeled cells in all brain areas that sent inputs to collicular neurons that are projecting to LP. The main nuclei identified were the Periaqueductal gray, the primary visual cortex and the Substantia nigra, suggesting their modulatory role in freezing responses.

**Conclusion:** The main areas labeled are sending excitatory projections to SC to reinforce the freezing behavior. Also, Ntsrl-GN209-Cre mice used in combination with flox-HSV for the first injection restricted more the viral tracing, specifically to the Ntsrl+-Wild-field neurons of SC which were already known that project to LP. The results were not completely consistent with the non-flox-HSV injections but the main nuclei named above were also labeled. These results suggest that the flox-HSV is necessary to exclude nonspecific labeling of projections from SC-LGN.

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**PS048**

## The influence of antipsychotics therapy and sociodemographic characteristics on cognitive performances in acute phase of schizophrenia

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**Aim:** The main purpose of this research was to examine the influence of sociodemographic characteristics (gender, age, level of education, heredity, alcohol and psychoactive substances), and the effect of different therapies on cognitive capabilities of patients diagnosed with schizophrenia.

**Introduction:** Schizophrenia, as one of the most common psychiatric diseases, is characterized by generalized cognitive damage with various degrees and in all domains of cognitive functioning. Cognitive dysfunction is one of the main causes of poor social and professional functioning for patients with schizophrenia.

**Methods:** The research involved 50 patients with acute phases of schizophrenia from the Psychiatric Clinic in Novi Sad. The primary instrument for the research was the standardized test for examination of cognitive impairments, Mini-Mental Scale Examination (MMSE).

**Results:** Acquired data correlated with MMSE score, noting the degree of cognitive impairments in patients, particularly significant with relation to age and duration of illness. Gender, level of education and type of used antipsychotics were not significantly correlated with MMSE score.

**Conclusion:** During this research it is found that aging and longer illness duration bear significant correlation to higher levels of cognitive impairment.

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**PS190**

## Voluntary inhibition of saccadic eye movements: EEG study

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