**Title of the project:** Microvascular abnormality as an endophenotype of schizophrenia

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**Summary of 2019 results**

**Title of the presentation:** Microvascular abnormality as a new endophenotype of schizophrenia  
**Authors:** Ladislav Hosak, Jan Studnicka, Omar Sery, Tomas Zeman, Laura Ewerlingova, Marie Jandova, Libor Ustohal, Marek Michalec

Objective: The aim of our study was to find out whether microvascular abnormality assessed by retinal imaging is an endophenotype of schizophrenia. We suggested that it may be found significantly more frequently in the schizophrenia patients’ healthy relatives than in the healthy unrelated controls.

Methods: The study was going on at the departments of psychiatry and ophthalmology of the university hospitals in Hradec Kralove and Brno, Czech Republic. The subjects were hospitalized patients with schizophrenia, their healthy first-degree relatives and healthy controls from the general population. We assessed retinas of the study subjects in order to ascertain possible microvascular abnormality, which may be related to inflammation. We applied the Wilcoxon test to compare our groups with each other.

Results: The groups of patients with schizophrenia (N=46; males N=34; average age 31.3), their healthy first-degree relatives (N=46; males N=16; average age 48.3) and healthy controls from the general population (N=36; males N=12; average age 32.9) were different from each other in their retinal venular width (left eye: 59.2 vs 58.2 vs 55.1; p=0.003-0.01; right eye: 59.5 vs 58 vs 56.1; p=0.02-0.05).

Conclusions: Our results suggest that microinflammation reflected in the widened retinal venules is present in the patients suffering from schizophrenia, and that microvascular abnormality in the retina seems to be promising as a new endophenotype of schizophrenia. The research into retina of patients with schizophrenia may contribute to our better knowledge of schizophrenia etiopathogenesis and possibly be of benefit to its treatment.

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**References:**

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