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

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Co-investigators: O. Sery, J. Studnicka, D. Bayer

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Summary of 2018 results

Title of the presentation: Microvascular abnormality as an endophenotype of schizophrenia
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The research project is aimed to assess whether microvascular abnormality evaluated by retinal imaging is an endophenotype of schizophrenia. If yes, it should be found significantly more frequently in the patients’ healthy relatives than in the general population. The project should contribute to our knowledge of schizophrenia etiopathogenesis in an innovative way. The following hypotheses are tested:
Microvascular abnormality detected by retinal imaging is significantly more frequent in the schizophrenia patients’ healthy relatives than in the healthy controls.
Micovascular abnormality has a genetic background related to angiogenesis and inflammation.
Assessment of microvascular abnormality and genetic examination should be performed in 80 patients of schizophrenia, their 80 healthy first-degree relatives, and 80 unrelated healthy controls.
At the end of 2018, we have investigated 63 duos patient-healthy relative and 40 healthy unrelated controls. Preliminary results show that diameter of retinal vessels in schizophrenia is larger than in healthy relatives, and the same diameter in healthy relatives is larger than that in healthy unrelated controls. This means that we will be able to prove microvascular abnormality as an endophenotype of schizophrenia. We are recently preparing a manuscript with our preliminary results to be submitted for a publication in an international IF psychiatric journal. Apart from other congresses, we will present our complete results at the scientific congress at the Charles University, School of Medicine in Hradec Kralove in January 2020.

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