Report MD-876

In the experiment MD-876 we use X-ray Phase-Contrast Tomography (XPCT) to investigate 3D damage in the Vascular and Neuronal Networks in EAE, an experimental model for multiple sclerosis, with and without mesenchyme cells (MSC) treatment.
A deficit in the Vascular-Network, has been successfully detected at two time points of the disease (onset and pre-chronic phase). We succeeded in measuring the alterations in the VN and NN and we also demonstrated the protective action exerted by the MSC preventively administered. Similarly, we showed that the attack to neurons also appears to be reduced by MSC treatment. Thanks to the achieved excellent 3D image quality, these findings provide new insights in EAE disease and MSC treatment going beyond the current knowledge.
However in order to describe the alterations caused by the EAE as well as the role of the MSC treatment, at different stages of the disease, a new experiment has to be performed to increase the number of measured time-points of the disease.