# How the marmoset can help us develop new therapies for Parkinson’s disease

New advances in the treatment of Parkinson's disease heavily depend on valid animal models of the disease that allows for the evaluation of symptoms over extended time periods. The marmoset is a primate that shares several important features with the human central nervous system but which is much smaller in size, greatly facilitating experimental handling.

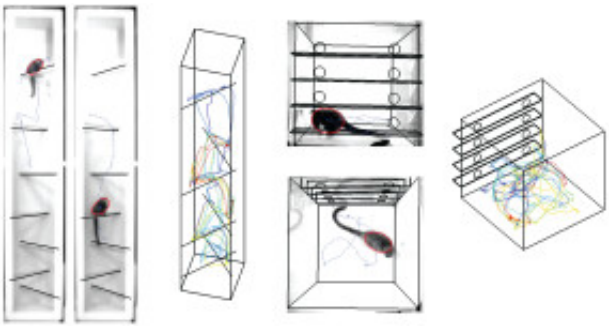

Fig. 1. Illustration of motion tracking of spontaneous locomotive behavior in two different testing set-ups.

In our recent study we developed a model of Parkinson’s disease in these small primates as well as new methods to study detailed changes in motor behavior. Importantly, in addition to conventional manual evaluations of motor symptoms, similar to clinical procedures, we also developed an automated imaging system that allowed us to quantitatively characterize different kinematic parameters in spontaneous locomotive behavior.

These measurements proved to be both sensitive and robust and revealed that motor symptoms were present throughout testing periods lasting several months. This non-human primate model of Parkinson’s disease and the methods developed to study motor symptoms will therefore provide new useful tools that can help researchers develop novel therapies for the treatment of Parkinson’s disease.

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## Publication

Characterization of long-term motor deficits in the 6-OHDA model of Parkinson's disease in the

common marmoset.
Santana M, Palmér T, Simplício H, Fuentes R, Petersson P.
*Behav Brain Res. 2015 Sep 1*