



THE PERRY & RUBY STEVENS

Parkinson's Disease

CENTER OF EXCELLENCE

Modeling Parkinson's Disease In Vitro and In Vivo: Biological and Therapeutic Applications Presented by Dr. Marcel Daadi

Abstract

The progressive degeneration and death of dopaminergic neurons in the midbrain is the hallmark of Parkinson's disease, a devastating movement disorder that manifests with tremor, bradykinesia and rigidity. In US over a million people suffer from PD and 60,000 new cases are diagnosed every year with an estimated cost of \$27 billion per year. Our understanding of this disease is still evolving and recent reports clearly indicate that it is a multisystem disease involving motor and non-motor symptoms. Now more than ever, cellular and animal models are essential to investigate disease development and progression and to establish sensitive and rigorous endpoints that will advance our understanding of disease mechanisms and preclinical development. We will present our recent findings on modeling Parkinson's disease in a cell culture system using induced pluripotent stem cells and in nonhuman primates which are considered the gold standard for modeling some of the complex features associated with this neurodegenerative disease.