Abstract

Parkinson's disease (PD) is the world's second most common neurodegenerative condition that can impact both the motor and non-motor functions of the patients. Recent advancement of medical imaging technology, especially magnetic resonance imaging (MRI) has allowed us to gain better understanding of the disease by probing the structural and functional alterations along the disease progression as potential biomarkers. The talk will be divided into two sections. In the first educational section, the audience will learn about the basics of Parkinson's disease, principles of MRI, and diffusion MRI. In the second section, I will present my research using diffusion MRI to investigate brain tissue changes due to Parkinson's disease and to guide the deep brain stimulation therapy for the treatment of the disorder.