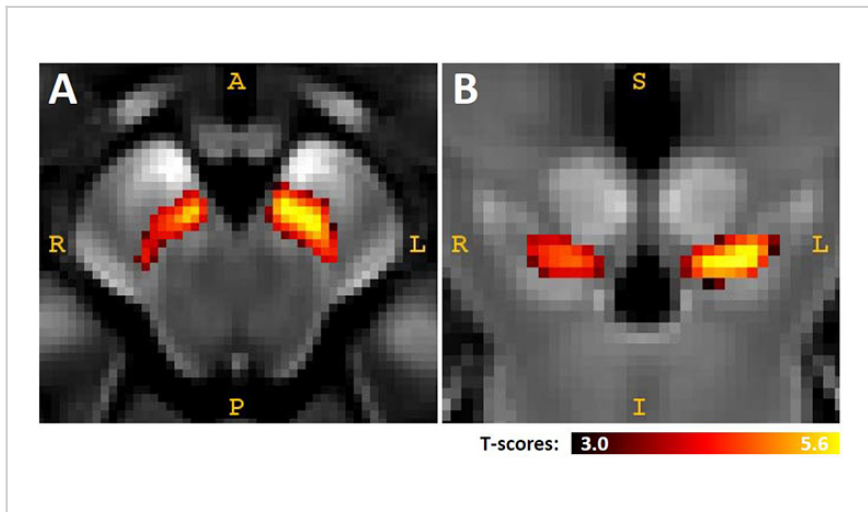


# MRI T1w and T2w Combined Features for Detecting Neurodegeneration

ID# 2018-4728



T1w/T2w ratio map in midbrain area

## Technology Summary

A novel method is disclosed for early Parkinson's disease (PD) detection. A simple MRI contrast, the T1w/T2w ratio, can serve as an in vivo marker for PD, showing early PD-related changes in the substantia nigra (SN).

## Application & Market Utility

This technology is used in the diagnosis, differential diagnosis, and progression monitoring of Parkinson's disease. Because of its simple implementation, high resolution, and wide availability, this novel method has high translational value for clinical practice and research. In addition, the T1w/T2w ratio may also be able to gauge disease severity as well.

## Next Steps

Complete further studies including PD patients with different durations and stages. Complete a longitudinal follow-up. Patent pending. Seeking licensing opportunities.

**TECHNOLOGY READINESS LEVEL**

**1-3**

### Seeking

Investment | Licensing | Research

### Keywords

- MRI
- Parkinson's Disease
- T1w
- T2w
- substantia nigra

### Researchers

**Guangwei Du**  
Assistant Professor  
[Online Bio](#)

**Xuemei Huang**  
Professor  
[Website](#)

**Mechelle Lewis**  
Assistant Professor  
[Website](#)

**Originating College**  
College of Medicine

**Office of Technology Management Contact**  
Martinez, Alison