IMPROVED MRI RESOLUTION WITH DIFFUSION DICTIONARY IMAGING (DDI)

Wang, Qing, Wang, Yong

Markiewicz, Gregory

T-019608

Technology Description

Researchers at Washington University in St. Louis have developed MRI post-processing software capable of imaging cellular components. The software matches specific patterns with a dictionary of signals corresponding to cellular components. While the researchers have previously modeled some tissue types at the sub-voxel level, this method is the first to apply to all tissue types.
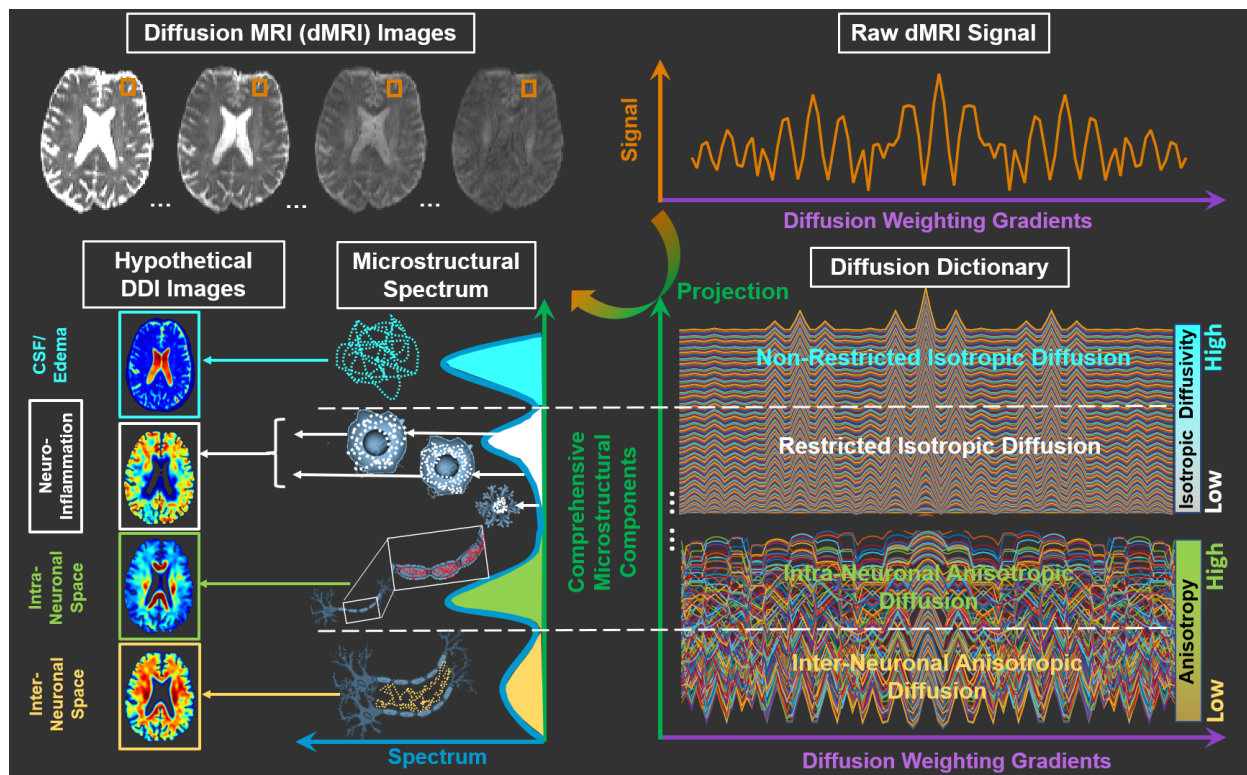
Stage of Research

Researchers have validated the DDI technique extensively in Alzheimer's disease and in tissue types such as placenta and cervix. DDI was validated using human tissues by comparing DDI noninvasive measurements with histologic quantification.

Applications

- Cellular-level MRI imaging

Key Advantages

- Can gather cellular information from MRI imaging
- Can be applied as post-processing software

Patents: Pending

Related Web Links: Yong Wang Profile & Lab; Qing Wang Profile