



# MRI of Amyloid Plaque in the Brain

Technology No. z04188

**IP Status:** Issued US Patent; **Application #:** 11/631,581

## In Vivo MRI Imaging of Amyloid Plaque

A magnetic resonance imaging (MRI) method performs in vivo imaging of amyloid plaque in the brain, with or without a contrast agent. The image is reconstructed using data acquired from a very high resolution spin-echo imaging pulse sequence, which achieves contrast using a respiratory gated and cardiac gated spin-echo pulse sequence to reduce motion artifacts at the very high image resolution required to see plaque. A preparatory pulse sequence ensures that longitudinal magnetization remains constant for all acquired views, even if the effective TR changes during the scan due to irregular breathing.

## Very High Resolution MRI using Respiratory Gating

The method, which acquires very high resolution in vivo images, uses respiratory gating. Each pulse sequence in the image acquisition is triggered by a signal from a physiological monitor that detects a specific point in the respiratory cycle. A preparatory pulse sequence precedes each imaging pulse sequence to create uniform view-to-view longitudinal magnetization in the presence of non-uniform view-to-view respiratory trigger times.

### BENEFITS AND FEATURES:

- In vivo imaging of amyloid plaque in the brain
- Can be used with or without a contrast agent
- Very high resolution spin-echo imaging pulse sequence acquires data
- Respiratory gated and cardiac gated spin-echo pulse sequences reduce motion artifacts
- Preparatory pulse sequence ensures that longitudinal magnetization remains constant for all acquired views
- Very high resolution

### APPLICATIONS:

- Brain MRI
- Alzheimer's disease

**Phase of Development** - Imaging; Pilot Scale Demonstration

### **Interested in Licensing?**

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