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STELLINGEN

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Monitoring Alzheimer's disease in transgenic mice with ultrahigh magnetic field imaging

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1. MRA significantly benefits from the ultra-high magnetic field. It is possible to visualize small size arteries noninvasively in mouse models of AD using MRA at 17.6 T.
   *This thesis, chapter 2.*

2. Aβ levels in the vessel wall may be responsible for impaired cerebral blood flow during AD development
   *This thesis, chapter 2.*

3. T₂ relaxation time is a sensitive method to measure white matter abnormalities in Alzheimer' disease.
   *This thesis, chapter 3.*

4. Elevated T₂ values of the corpus callosum of Tg2576 mice observed at early stage of amyloid deposition suggest that white matter pathology occur early in AD progression.
   *This thesis, chapter 3.*

5. In spite of technical difficulties suggested by Rob et al 2007, it is possible to acquire T₂ values of healthy mouse brain with high signal reproducibility at 17.6 T.
   *Rob C.G. van de Ven et al., 2007 Magnetic resonance in medicine 58:390-395.
   *This thesis, chapter 4.*

6. The estimates of in vivo T₁ and T₂ will be useful to optimize pulse sequences for optimal image contrast at 17.6 T and will serve as baseline values against which disease related relaxation changes could be assessed in mice.
   *This thesis, chapter 4.*

7. The apparent decrease of the brain T₂ values with increasing field strength is incompatible with straightforward BPP model dipolar relaxation processes.
   *This thesis, chapter 4.*

8. In addition to a scientific promotor, it is essential to have a life coach while doing a PhD.

9. Dutch food can be nice depends on who cooks it.