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In vivo magnetic resonance imaging and spectroscopy of Alzheimer_s disease in transgenic mice

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Stellingen

behorende bij het proefschrift

***In vivo* magnetic resonance imaging and spectroscopy of Alzheimer's disease in transgenic mice**

Niels Braakman

10 december 2008

1. Using MRI techniques it is possible to monitor the progression of Alzheimer's disease without accurate visualization of individual plaques.
This thesis, chapters 3 and 5.
2. Iron is not the sole contributor to the plaque-specific T_2 contrast.
This thesis, chapter 3;
N. El Tannir El Tayara et al., Magnetic Resonance in Medicine (2007) 58:179–184.
3. In spite of the technological hurdles reported by Méric *et al.*, *in vivo* localized 2D MR spectroscopy of the mouse brain is possible.
This thesis, chapters 4 and 5;
P. Méric, et al., MAGMA (2004) 17:317–338.
4. It is anticipated that further development and implementation of localized 2D MR Spectroscopy techniques will increase our understanding of Alzheimer's disease.
This thesis, chapter 5.
5. Due to the correlation between glycerophosphocholine levels and plaque load, GPC is proposed as an early biomarker for Alzheimer's disease.
This thesis, chapter 5.
6. Amyloid plaque formation, in mice, is a rapid but rare event.
M. Meyer-Luehmann et al., Nature (2008) 451:720-724.

7. PhD research can be compared with the slingshot maneuver in space flight.
8. Engineering is an important aspect of cooking.
9. The discussion about the relationship between the Netherlands and its constituent countries overseas is currently focused too much on either utilitarian or moral-sentimental considerations.
10. The saying “shallow streams make the most noise” is all the more valid today.