

Biomedical NMR Unit - Publications (peer reviewed) from 2006

1. A. Devos, Bergans N, **Dresselaers T**, De Brabanter J, Sima DM, Vanhamme L, Vanstapel F, **Van Hecke P**, Van Huffel S. Model order selection for quantification of a multi-exponential magnetic resonance spectrum. *IEEE Eng Med Biol Soc.* **1**:1299-302 (2006).
2. T.A. Nguyen, **T Dresselaers**, P Verboven, G D'hallewin, N Culeddu, **P Van Hecke**, BM Nicolai: Finite element modelling and MRI validation of 3D transient water profiles in pears during postharvest storage. *J. Sci. Food Agricult.* **86**: 745-756 (2006).
3. P.J. Siddall, P. Stanwell, A. Woodhouse, R.L. Somorjai, B. Dolenko, A. Nikulin, R. Bourne, **U. Himmelreich**, C. Lean, M.J. Cousins and C.E. Mountford: Magnetic resonance spectroscopy detects biochemical changes in the brain associated with chronic low back pain: a preliminary report. *Anesthesia and Analgesia* **102**, 1164-1168 (2006).
4. T.C. Sorrell, L.C. Wright, R. Malik and **U. Himmelreich**: Application of proton nuclear magnetic resonance spectroscopy to the study of *Cryptococcus* and cryptococcosis. *FEMS Yeast Research* **6**, 558-566 (2006).
5. **U. Himmelreich**, S. Aime, T. Hieronymus, C. Justicia, F. Uggeri, M. Zenke and M. Hoehn: A responsive MRI contrast agent to monitor functional cell status. *Neuroimage* **32**, 1142-1149 (2006).
6. E. Wills Petzold, **U. Himmelreich**, E. Mylonakis, T. Rude, D. Toffaletti, G.M. Cox, J.L. Miller and J.R. Perfect: The characterization and regulation of the trehalose synthesis pathway, and its importance in the pathogenicity of *Cryptococcus neoformans*. *Infect. Immun.* **74**: 5877-5887 (2006).
7. M. Coen, J. Bodkin, D. Power, W.A. Bubb, **U. Himmelreich**, P.W. Kuchel and T.C. Sorrell: Antifungal effects on metabolite profiles of medically important yeast species measured by nuclear magnetic resonance spectroscopy. *Antimicrob. Agents Chemother.* **50**: 4018-4026 (2006).
8. H.-M. Daniel, **U. Himmelreich** and T. Dedeurwaerdere: Integrating different windows on reality: socio-economic and institutional challenges for culture collections. *Intl. Social Sci. J.* **188**: 369-380 (2006).
9. P. Stiers, Peeters R, Lagae L, **Van Hecke P**, Sunaert S.: Mapping multiple visual areas in the human brain with a short fMRI sequence. *Neuroimage* **29**:74-89 (2006).
10. E. Kapreli, Athanasopoulos S, Papatnasiou M, **Van Hecke P**, Strimpakos N, Gouliamos A, Peeters R, Sunaert S.: Lateralization of brain activity during lower limb joints movement. An fMRI study. *Neuroimage* **32**:1709-1721 (2006).
11. M. Vandenbulcke, Peeters R, Dupont P, **Van Hecke P**, Vandenberghe R.: Word reading and posterior temporal dysfunction in amnesic mild cognitive impairment. *Cereb. Cortex* **17**:542-551 (2006).

12. A. Antosik-Biernacka, Peuskens H, De Hert M, Peuskens J, Sunaert S, **Van Hecke P**, Goraj B.: Magnetization transfer imaging in chronic schizophrenia. *Med. Sci. Monit.*: **12**:17-21 (2006).
13. F. Chen, Sun X, De Keyzer F, Yu J, Peeters R, Coudyzer W, Vandecaveye V, Landuyt W, Bosmans H, **Van Hecke P**, Marchal G, Ni Y.: Liver tumor model with implanted rhabdomyosarcoma in rats: MR imaging, microangiography, and histopathologic analysis. *Radiology* **239**:554-562 (2006).
14. S. Kovacs, Peeters R, Smits M, De Ridder D, **Van Hecke P**, Sunaert S.: Activation of cortical and subcortical auditory structures at 3 T by means of a functional magnetic resonance imaging paradigm suitable for clinical use. *Invest. Radiol.* **41**:87-96 (2006).
15. M. Smits, Peeters RR, **van Hecke P**, Sunaert S.: A 3 T event-related functional magnetic resonance imaging (fMRI) study of primary and secondary gustatory cortex localization using natural tastants. *Neuroradiology* **49**:61-71 (2006).
16. Q. Liu, Monbaliu D, Vekemans K, Peeters R, De Keyzer F, **Dresselaers T**, Ni Y, **Van Hecke P**, Komuta M, Brassil J, Marchal G, Pirenne J. Can apparent diffusion coefficient discriminate ischemic from nonischemic livers? A pilot experimental study. *Transplant Proc.* **38**:2643-2646 (2007).
17. K. De Bock, **Dresselaers T**, Kiens B, Richter EA, **Van Hecke P**, Hespel P. Evaluation of intramyocellular lipid breakdown during exercise by biochemical assay, NMR spectroscopy, and Oil Red O staining. *Am J Physiol Endocrinol Metab.* **293**:428-434 (2007).
18. L. Dubois, **Dresselaers T**, Landuyt W, Paesmans K, Mengesha A, Wouters BG, **Van Hecke P**, Theys J, Lambin P. Efficacy of gene therapy-delivered cytosine deaminase is determined by enzymatic activity but not expression. *Brit. J. Cancer* **96**:758-761 (2007).
19. H. Miletic, Y. Fischer, S. Litwak, T. Giroglou, Y. Waerzeggers, S. Winkeler, H. Li, **U. Himmelreich**, C. Lange, W. Stenzel, M. Deckert, H. Neumann, A.H. Jacobs and D. von Laer: Bystander Killing of Malignant: Glioma by Bone Marrow-derived Tumor-Infiltrating Progenitor Cells Expressing a Suicide. *Mol. Ther.* **15**: 1373-1381 (2007).
20. A. Winkeler, M. Sena-Esteves, L.E.M. Paulis, H. Li, Y. Waerzeggers, B. Rückriem, **U. Himmelreich**, M. Klein, P. Monfared, M.A. Rueger, M. Heneka, S. Vollmar, M. Hoehn, C. Fraefel, R. Graf, K. Wienhard, W.D. Heiss, A.H. Jacobs: Switching on the Lights for Gene Therapy. *PLoS One* **2**(6): e528 (1-8) (2007).
21. H. Miletic, Y.H. Fischer, T. Giroglou, M.A. Rueger, A. Winkeler, H. Li, **U. Himmelreich**, W. Stenzel, A.H. Jacobs, D. von Laer: Normal brain cells contribute to the bystander effect in a suicide gene therapy - approach for malignant glioma using lentiviral pseudotyped vectors. *Clin. Cancer Res.* **13**: 6761-6768 (2007).
22. M. Hoehn, D. Wiedermann, C. Justicia, P. Ramos-Cabrer, K. Kruttwig, T. Farr, **U. Himmelreich**: Cell Tracking using Magnetic Resonance Imaging. *J. Physiol.* **485**: 25-30 (2007).

23. J. B. Pouillet, Sima DM, Van Huffel S, **Van Hecke P.**: Frequency-selective quantitation of short-echo time 1H magnetic resonance spectra. *J. Magn. Reson.* **186**:293-304 (2007).
24. E. Kapreli, Athanasopoulos S, Papathanasiou M, **Van Hecke P**, Keleki D, Peeters R, Strimpakos N, Sunaert S.: Lower limb sensorimotor network: issues of somatotopy and overlap. *Cortex* **43**:219-232 (2007).
25. M. Smits, Kovacs S, de Ridder D, Peeters RR, **van Hecke P**, Sunaert S.: Lateralization of functional magnetic resonance imaging (fMRI) activation in the auditory pathway of patients with lateralized tinnitus. *Neuroradiology* **49**:669-679 (2007).
26. J. Aragonés, Schneider M, Van Geyte K, Fraisl P, **Dresselaers T**, Mazzone M, Dirckx R, Zacchigna S, Lemieux H, Jeoung NH, Lambrechts D, Bishop T, Lafuste P, Diez-Juan A, Harten SK, Van Noten P, De Bock K, Willam C, Tjwa M, Grosfeld A, Navet R, Moons L, Vandendriessche T, Deroose C, Wijeyekoon B, Nuyts J, Jordan B, Silasi-Mansat R, Lupu F, Dewerchin M, Pugh C, Salmon P, Mortelmans L, Gallez B, Gorus F, Buyse J, Sluse F, Harris RA, Gnaiger E, Hespel P, **Van Hecke P**, Schuit F, Van Veldhoven P, Ratcliffe P, Baes M, Maxwell P, Carmeliet P.: Deficiency or inhibition of oxygen sensor Phd1 induces hypoxia tolerance by reprogramming basal metabolism. *Natur Genet.* **40**:170-180 (2008).
27. M. Hoehn, **U. Himmelreich**, K. Kruttwig, D. Wiedermann: Molecular MR Imaging: Potentials and Challenges for Neurological Applications. *J. Magn. Reson. Imag.* **27**:941-954 (2008).
28. E. Küstermann, **U. Himmelreich**, K. Kandal, T. Geelen, A. Ketkar, D. Wiedermann, C. Strecker, J. Esser, S. Arnhold and M. Hoehn: Efficient stem cell labeling for MRI studies. *Contrast Media Mol. Imag.* **3**:27-37 (2008).
29. **U. Himmelreich** and M. Hoehn: Stem cell labeling for Magnetic Resonance Imaging. *Minimally Invasive Therapy and Allied Technologies (MITAT)* **17**:132-142 (2008).
30. Y. Waerzeggers, M. Klein, H. Miletic, **U. Himmelreich**, H.-F. Li, U. Herrlinger, M. Hoehn, H.H. Coenen, M. Weller, A. Winkeler, A.H. Jacobs: Multi-modal imaging of neural progenitor cell fate in rodents. *Mol. Imag., in press* (2008).

Book Chapters

1. **U. Himmelreich** and R.K. Gupta: Application of magnetic resonance for the diagnosis of infective brain lesions. In: G.A. Webb (Ed.), *Modern Magnetic Resonance, Volume 2*: C.E. Mountford and U. Himmelreich (Eds.) *Applications in Medical and Pharmaceutical Sciences*, Springer, Dordrecht, 991-999, ISBN 1-4020-3894-1 (2006).
2. M. Hoehn and **U. Himmelreich**: In vivo molecular MR imaging – potential and limits. In: G.A. Webb (Ed.), *Modern Magnetic Resonance, Volume 2*: C.E. Mountford and U. Himmelreich (Eds.) *Applications in Medical and Pharmaceutical Sciences*, Springer, Dordrecht, 1073-1084, ISBN 1-4020-3894-1 (2006).