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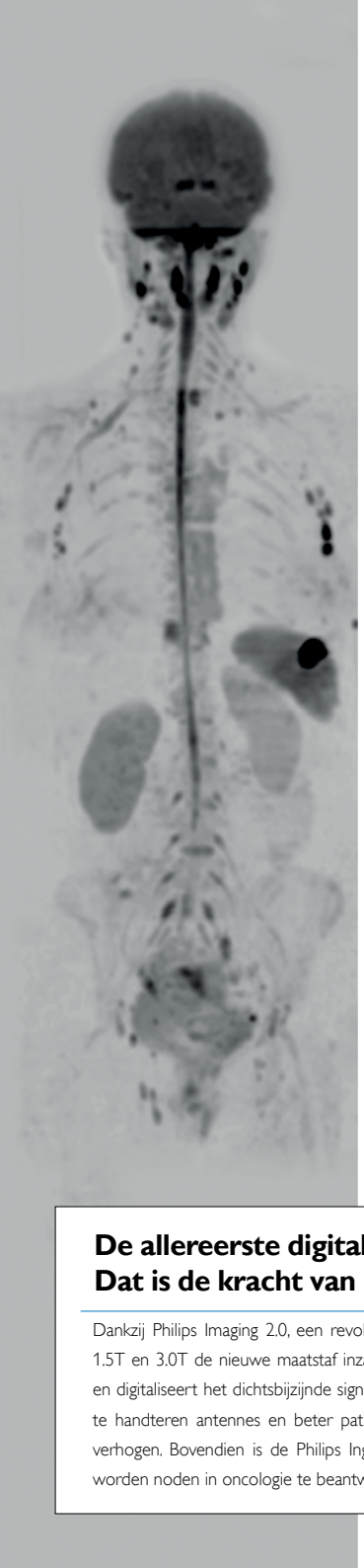

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Dear participant,

We offer you a very warm welcome to the fifth annual ISMRM Benelux chapter meeting at Lantaren Venster in Rotterdam. This year it takes place in a beautiful modern location with a stunning view on Rotterdam's harbor. Hopefully, you will enjoy the inspiring environment as much as in previous years.

The primary goal of this meeting is to foster the network of the ISMRM Benelux community to share our knowledge within the field of MRI. Therefore, you are provided with an interesting program with 4 parallel sessions, each including 2 different topics, in which young investigators get the opportunity to present and share their work. In order to approach everyone's interest, we divided sessions into technical (MR spectroscopy, high field, MR methods/RF engineering) and more (pre)clinical topics (resting state fMRI, cardiovascular, preclinical, perfusion, neuro-diffusion).

Besides an extensive scientific program, there is also the opportunity to socialize and network during the breaks, lunch and dinner. We encourage you to take this occasion to view posters, exchange knowledge, visit the sponsor booths, and strengthen your network, which might lead to interesting insights and successful collaborations.

We would also like to take this opportunity to acknowledge our sponsors for their generous contributions, and the board for their support. I would also personally like to thank my fellow organizers for their exceptional dedication and hard work. Finally, we would like to THANK YOU: all the authors for sending in abstracts, reviewers for rating them, chairmen for moderating sessions and all of you for participating this year's ISMRM Benelux meeting.

On behalf of the organizing committee 2013,

Christian Bigot

*Chair ISMRM Benelux Organizing Committee 2013*

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**!!! GET INVOLVED !!!**

**Join the organizing committee for next year's meeting!**

If interested, please contact this year's organizing committee (meeting2013@benelux-ismrm.org) or the members of the board.

Don't forget to join the 'ISMRM Benelux Chapter' discussion group on LinkedIn !!!





# Program Overview

09.30 Welcome with Coffee / Tea

10.00 Plenary Program: Welcome and Introduction (Large Auditorium)

10.15 Start Parallel Session 1

**Spectroscopy** - Large Auditorium
**Preclinical** - Theater 5

11.15 Break

11.45 Start Parallel Session 2

**Cardiovascular** - Large Auditorium
**Resting State fMRI** - Theater 5

12.30 Start **Poster Session**

(runs until 14:30)

13.00 Lunch

**Visit sponsors**

13.45 Annual Members Meeting (Large Auditorium)

14.30 Start Parallel Session 3

**Perfusion** - Large Auditorium
**MR Methods / RF Engineering** - Theater 5

15.45 Break

16.15 Start Parallel Session 4

**High Field** - Large Auditorium
**Neuro - Diffusion** - Theater 5

17:30 Lustrum Reception with Live Music

18:00 Dinner

**Large Auditorium**

# Spectroscopy

## Moderators of Oral Session

Marinette van der Graaf
Department of Radiology, Radboud University Nijmegen Medical Center, Nijmegen, The Netherlands

Jannie Wijnen
Image Sciences Institute, University Medical Center Utrecht, Utrecht, The Netherlands

10:15 ***Mariska P. Luttje*** - Uniform and broadband $^{31}$P MRSI combined with $^{1}$H MRSI in the human prostate using a double tuned quadrature endorectal coil (PRES1-1)

Imaging Division, University Medical Center Utrecht, Utrecht, The Netherlands

10:27 ***Patricia M. Nunes*** - Impact of fructose and glucose diets on lipid metabolism studied in vivo by multinuclear MR spectroscopy (PRES1-2)

Department of Radiology, Radboud University Nijmegen Medical Center, Nijmegen, The Netherlands

10:39 ***Melissa T. Hooijmans*** - Phosphodiester level as a biomarker for disease progression in Becker Muscular Dystrophy (PRES1-3)

C. J. Gorter Center for High Field MRI, Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands

10:51 ***Bart Wessels*** - Oxygen delivery does not limit mitochondrial function in skeletal muscle of healthy and diabetic rats in vivo (PRES1-4)

Biomedical NMR, University of Technology Eindhoven, Eindhoven, The Netherlands

11:03 Poster Teasers (PT1-*xx)*





**Theater 5**

# Preclinical

## Moderators of Oral Session

Greetje Vanhoutte
Bio-Imaging Lab, University of Antwerp, Antwerpen, Belgium

Christine Nabuurs
NUTRIM School of Nutrition, Toxicology & Metabolism, Maastricht University Medical Center, Maastricht, The Netherlands

10:15 ***Maarten van Beek*** - Effects of a nutrient-combination diet on cerebral blood flow, metabolites levels and brain diffusion in ApoE4 and ApoE knockout mice (PRES2-1)

Radboud University Nijmegen Medical Center, Nijmegen, The Netherlands

10:27 ***Muhammed Yildirim*** - In vivo 3D spectroscopic imaging of 19F compounds using backprojection (PRES2-2)

MR Development, Advanced Diagnostic Imaging, Philips Healthcare, Best, The Netherlands and Biomedical NMR, Eindhoven University of Technology, Eindhoven, The Netherlands

10:39 ***Florence Colliez*** - Quantitative comparison of MOBILE (Mapping of Oxygen By Imaging Lipids relaxation Enhancement) and EPR oximetry in multiple tumor models (PRES2-3)

Louvain Drug Research Institute, Laboratory of Biomedical Magnetic Resonance, Université Catholique de Louvain, Brussels, Belgium

10:51 ***Esben Plenge*** - Improving visualization of mouse brain nuclei in manganese-enhanced MRI using super-resolution reconstruction (PRES2-4)

BIGR, Radiology & Medical Informatics, Erasmus MC University Medical Center Rotterdam, Rotterdam, The Netherlands

11:03 Poster Teasers (PT2-*xx)*

**Large Auditorium**

# Cardiovascular

## Moderators of Oral Session

Bram Coolen
Department of Radiology, Academic Medical Center, Amsterdam, The Netherlands

Mark Hofman
Department of Physics and Medical Technology, VU University Medical Center, Amsterdam, The Netherlands

11:45 ***Bastiaan J. van Nierop*** - In vivo ultra short TE (UTE) MRI detects diffuse fibrosis in hypertrophic mouse hearts (PRES3-1)

Biomedical NMR, Department of Biomedical Engineering, Eindhoven University of Technology, Eindhoven, The Netherlands

11:57 ***Petronella A. van Ewijk*** - Effect of maternal exposure to high fat feeding on cardiac metabolism and function in offspring (PRES3-2)

Human Biology / Radiology, Maastricht University Medical Centre, Maastricht, The Netherlands

12:09 ***Wyger Brink*** - Improvements in cardiac MRI at 3T using high permittivity materials (PRES3-3)

Leiden University Medical Center, Leiden, The Netherlands

12:21 Poster Teasers (PT3-*xx*)





**Theater 5**

# Resting State fMRI

## Moderators of Oral Session

Kasper Claes
Bio-Imaging Lab, University of Antwerp, Antwerpen, Belgium

Pieter Buur
SPINOZA Center for Neuroimaging, Amsterdam, The Netherlands

11:45 ***Marjolein Verly*** - Structural and functional underconnectivity as a negative prognostic marker for language in autism spectrum disorder (PRES4-1)

ExpORL, Department of Neurosciences, Catholic University of Leuven, Leuven, Belgium

11:57 ***Elisabeth Jonckers*** - Functional connectivity of the mouse brain is influenced by state of consciousness: a comparison of awake and differentially anesthetized mouse rsfMRI protocols (PRES4-2)

Bio-Imaging Lab, University of Antwerp, Antwerpen, Belgium

12:09 ***René Besseling*** - Altered functional connectivity consistent with associated language impairment in rolandic epilepsy (PRES4-3)

Department of Radiology, Maastricht University Medical Center, Maastricht, the Netherlands

12:21 Poster Teasers (PT4-*xx*)

**Large Auditorium**

# Perfusion

## Moderators of Oral Session

Bernd Müller-Bierl
Radiology - CRAD - Magnetic Resonance Center, University Hospital Brussels, Brussels, Belgium

Jaap Jansen
Department of Radiology, Maastricht University Medical Center, Maastricht, The Netherlands

14:30 ***Raf H. M. van Hoof*** - Determination of the vascular input function using magnitude or phase-based MRI: influence on dynamic contrast-enhanced MRI model parameters in carotid plaques (PRES5-1)

Department of Radiology, Maastricht University Medical Center, Maastricht, The Netherlands

14:42 ***Stefan Hindel*** - Investigating mixed flow permeability limitted models using double contrast agent (PRES5-2)

Klinik und Poliklinik für Strahlentherapie, Universitätsklinikum Essen, Essen, Germany

15:54 ***Jill B. De Vis*** - Non-invasive assessment of cerebral metabolic rate of oxygen in neonates (PRES5-3)

Department of Radiology, University Medical Center Utrecht, Utrecht, the Netherlands

15:06 ***Henri J. M. M. Mutsaerts*** - Whole brain arterial transit times in the elderly estimated using arterial spin labeling (PRES5-4)

Radiology Department, Academic Medical Center, Amsterdam, The Netherlands

15:18 ***Xingxing Zhang*** - Fast cerebral flow territory mapping using vessel selective dynamic arterial spin labeling (PRES5-5)

C. J. Gorter Center for High Field MRI, Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands

15:30 ***Wouter Koning*** - Full brain and territorial arterial spin labeling with external RF shimmed labeling coil at 7 Tesla (PRES5-6)

Department of Radiology, University Medical Center Utrecht, Utrecht, the Netherlands





**Theater 5**

# MR Methods / RF Engineering

## Moderators of Oral Session

Tom Scheenen
Department of Radiology, Radboud University Nijmegen Medical Center, Nijmegem, The Netherlands

Astrid van Lier
Department of Radiology, Radiotherapy and Nuclear Medicine, University Medical Center Utrecht, Utrecht, The Netherlands

14:30 ***Jetse S. van Gorp*** - Prospective compressed sensing accelerated spectroscopic imaging for use in geometrically accurate in vivo imaging (PRES6-1)

Image Sciences Institute, University Medical Center Utrecht, Utrecht, The Netherlands

14:42 ***Rik P. M. Moonen***- Enhanced contrast of superparamagnetic iron oxide contrast agents by spin-lock MR (PRES6-2)

Biomedical NMR, Department of Biomedical Engineering, Eindhoven University of Technology, Eindhoven, The Netherlands

15:54 ***Mie Kee Lam*** - Absolute MR thermometry for near-field monitoring during MR-HIFU heating (PRES6-3)

Image Sciences Institute, University Medical Center Utrecht, Utrecht, the Netherlands

15:06 ***Jennifer Poelmans*** - Prospectively and retrospectively gated MRI sequences enable longitudinal follow-up of bleomycin-induced murine lung fibrosis (PRES6-4)

Biomedical MRI unit/ MoSAIC, Department of Imaging and Pathology, KU Leuven, Leuven, Belgium

15:18 ***Irene M. L. van Kalleveen*** - 2D compensating RF pulse with uniform image contrast in combination with an internal transceiver at 7T (PRES6-5)

Department of Radiology, University Medical Center Utrecht, Utrecht, the Netherlands

15:30 ***Tom Schreurs*** - A small animal magnetic resonance elastography setup (PRES6-6)

Biomedical NMR, Department of Biomedical Engineering, Eindhoven University of Technology, Eindhoven, The Netherlands

Large Auditorium

# High Field

## Moderators of Oral Session

Hans Hoogduin
Image Sciences Institute, University Medical Center Utrecht, Utrecht, The Netherlands

Marnix Maas
Department of Radiology, Radboud University Nijmegen Medical Center, Nijmegen, The Netherlands

16:15 ***Alessandro Sbrizzi*** - TRIPLET: Transmit and receive fields reconstruction from a single low-tip-angle gradient-echo scan (PRES7-1)
Imaging Division, University Medical Center Utrecht, Utrecht, the Netherlands

16:27 ***Sebastian Aussenhofer*** - High permittivity solid ceramic resonators for high field human MRI (PRES7-2)
C. J. Gorter Center for High Field MRI, Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands

16:39 ***Alexandra A. J. de Rotte*** - Feasibility of high-resolution pituitary MRI at 7.0 Tesla (PRES7-3)
Department of Radiology, University Medical Center Utrecht, Utrecht, the Netherlands

16:51 ***Bart L. van de Bank*** - Multi-center reproducibility of short echo time single voxel $^{1}$H MRS of the human brain at 7T with adiabatic slice-selective refocusing pulses (PRES7-4)
Department of Radiology, Radboud University Medical Center, Nijmegen, The Netherlands

17:03 ***Martijn Lunenburg*** - 7-channel half cylinder shaped transmit coil with 32-channel receiver array for multipurpose head imaging at 7 Tesla (PRES7-5)
Department of Radiology, University Medical Center Utrecht, Utrecht, The Netherlands

17:15 ***Miriam Lagemaat*** - $^{31}$P MR spectroscopic imaging of patients with prostate cancer at 7 Tesla (PRES7-6)
Department of Radiology, Radboud University Medical Center, Nijmegen, The Netherlands





Theater 5

# Neuro - Diffusion

## Moderators of Oral Session

Ben Jeurissen
Vision Lab, University of Antwerp, Antwerpen, Belgium

Uwe Himmelreich
Biomedical MRI unit/ MoSAIC, Department of Imaging and Pathology, Catholic University Leuven, Leuven, Belgium

16:15 ***Damien Jacobs*** - High resolution diffusion tensor imaging in vivo and tractography of rat spinal cord injury at 11.7 Tesla (PRES8-1)
Louvain Drug Research Institute, Université catholique de Louvain, Brussels, Belgium

16:27 ***Matteo Bastiani*** - Cortical fiber insertions and automated layer classification in human motor cortex from 9.4 Tesla diffusion MRI (PRES8-2)
Department of Psychology & Neuroscience, University of Maastricht, The Netherlands

16:39 ***Nathalie Doorenweerd*** - Altered brain morphology in boys with Duchenne Muscular Dystrophy compared to healthy age matched controls (PRES8-3)
Division of Radiology and Neurology, Leiden University Medical Center, Leiden, The Netherlands

16:51 ***Sofie Van Cauter*** - Comparison of diffusion kurtosis imaging, dynamic susceptibility-weighted MR imaging and short echo time chemical shift imaging for grading gliomas (PRES8-4)
Magnetic Resonance Unit, Catholic University Leuven, Leuven Belgium

17:03 ***Chantal M. W. Tax*** - Robust fiber response function estimation for deconvolution based diffusion MRI methods (PRES8-5)
Image Sciences Institute, University Medical Center Utrecht, Utrecht, Netherlands

17:15 ***Thijs Dhollander*** - Using track orientation distributions to robustify probabilistic tractography (PRES8-6)
Medical Imaging Research Center (MIRC), Catholic University Leuven, Leuven, Belgium

# Notes





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