4th ONE-DAY SYMPOSIUM

YOUNG BELGIAN MAGNETIC RESONANCE SCIENTISTS (4th YBMRS)

Brussels, Friday, November 25th, 2005

Universitaire Stichting / Fondation Universitaire
Egmontstraat 11 / 11, rue d'Egmont
B-1000 BRUSSELS

Jointly Organized by

FNRS Groupe de Contact
Résonance Magnétique Pluridisciplinaire
R. Muller (UMH), President

FWO-Vlaanderen Wetenschappelijke Onderzoeksgemeenschap
Gevorderde NMR toepassingen in de materiaal-, chemische en biomedische wetenschappen
P. Van Hecke (KUL), President

Organized by
Michel Luhmer (ULB), José C. Martins (UGent)

Programme

8.15 Registration of the Participants and Coffee/Tea

8.55-10.15 **Morning Session 1**
Chair: R. Muller (UMH)
FNRS - Groupe de Contact RMP

8.55 Introduction

9.00 *Rainer Kimmich, Universität Ulm, Germany*
NMR-mapping of ionic currents and electro-osmotic flow in microsystem channel networks

9.50 *Yves De Deene (UGent)*
Quantitative MRI for polymer gel radiation dosimetry
Y. De Deene
Radiotherapy department - MR-department, Universitair Ziekenhuis Gent

10.15-10.40 **Coffee/Tea Break**

10.40-12.20 **Morning Session 2**
Chair: R. Dommisse (UA)
FWO - Onderzoeksgemeenschap NMR

10.40 *Tatjana Parac-Vogt (KUL)*
Supramolecular approach towards obtaining efficient gadolinium(III) MRI contrast agents
T. N. Parac-Vogt[1], K. Kimpe[1], A. Pacco[1],K. Binnemans[1], S. Laurent[2], L. Vander Elst[2], C. Piérart[2], R. Muller[2]
[1] Department of Chemistry, Katholieke Universiteit Leuven and [2] NMR and Molecular Imaging Laboratory, Université de Mons-Hainaut

11.05 *Pierre-Henri Guelluy (ULg)*
Study of neuronal cells preconditioning by ESR
P-H Guelluy, G. Deby-Dupont, M. Hoebeke
Department of Biomedical Spectroscopy, Université de Liege

Programme Continued

11.30 *Geert De Groof (UA)*

Using diffusion tensor imaging (DTI) to assess the neuronal plasticity in the brain of a songbird

G. De Groof, M. Verhoye, A. Leemans, A. Van der Linden

Bio-Imaging Lab, Universiteit Antwerpen

11.55 *Luk Van Lokeren (VUB)*

Diffusion Ordered Spectroscopy on Functionalized Metal Oxides: From Model Cluster to Nanoparticle

L. Van Lokeren, F. Ribot, C. Sanchez, V. Escax, G. Maheut, J.C. Martins, L. Ghys, I. Verbruggen, M. Biesemans, R. Willem

Hoog Resolutie NMR Centrum (HNMR), Vrije Universiteit Brussel

12.20-14.00 **Lunch Break**

14.00-15.40 **Afternoon Session 1**

Chair: Michel Luhmer (ULB)

FNRS - Groupe de Contact RMP

14.00 *Greg Cron (UCL)*

Changes in the Tumor Microenvironment during Low Dose Rate Permanent Seed Implantation Iodine-125 Brachytherapy

G. O. Cron, N. Beghein, N. Crokart, E. Chavée, S. Bernard, S. Vynckier, P. Scalliet, B. Gallez

Laboratory of Biomedical Magnetic Resonance, Université Catholique de Louvain, Bruxelles

14.25 *Gilles Bruylants (ULB)*

The NMR and ITC study of the interaction between chymotrypsin and proflavin: How a case study can become a brain-teaser.

G. Bruylants, R. Wintjens, Y. Looze, K. Bartik

Molecular and Biomolecular Engineering, Faculty of Applied Sciences, Université Libre de Bruxelles

14.50 *Damien Braekers (ULg)*

Nuclear magnetic resonance : "a tool in actinides chemistry and nuclear wastes reprocessing

D.Braekers, V. Host, B. Lambert, J.F. Desreux

Laboratory of Radiochemistry and Coordination Chemistry, Université de Liege

Programme Continued

15.15 *K. Baeten (UH)*

Tracking of immune cells in experimental autoimmune encephalomyelitis using paramagnetic iron oxide particles and high resolution MRI

K. Baeten, P. Adriaensens, N. Hellings, J. Hendriks, F. Vandenaabele , E. Theunissen, P. Stinissen and J. Gelan

Universiteit Hasselt

15.40 **Coffee/Tea break**

16h05-17h10 **Afternoon Session 2**

Chair: *R. Willem* (VUB)

FWO - Onderzoeksgemeenschap NMR

16.05 *Guillaume Berthon-Gelloz (UCL)*

Understanding the catalytic activity of Pt(0) N-heterocyclic carbene complexes for the hydrosilylation of alkenes through ^{195}Pt NMR

G. Berthon-Gelloz, D. Chapon, B. Tinant and István E. Markó

Department of Chemistry, Université Catholique de Louvain

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16.30 *Sabine Van Doorslaer, Universiteit Antwerpen, Belgium*

Electrons Spying on Molecular Structure - The Application of Electron Paramagnetic Resonance in the Structural Analysis of Metalloproteins and Synthetic Catalysts

17.20 Closing Remarks by the Chairman

17.25 End