PROGRAM

STANDING AT THE CROSSROADS: 40 YEARS OF MR CONTRAST AGENTS

MONS, BELGIUM
9 - 10 MAY 2019

1988 – 2018:
30 YEARS OF THE EUROPEAN CONFERENCE ON CONTRAST AGENT SCIENCES

Contrast-Enhanced Biomedical Imaging
The 16th Meeting in the Series
STANDING AT THE CROSSROADS: 40 YEARS OF MR CONTRAST AGENTS

SCIENTIFIC COMMITTEE

Prof. Silvio Aime
University of Torino (Italy)

Prof. Per Åkeson,
Kristianstad (Sweden)

Prof. Sylvie Begin
University of Strasbourg (France)

Prof. Françoise Chuburu
University of Reims (France)

Prof. Carlos Geraldes
University of Coimbra, (Portugal)

Prof. Serge Goldman
University of Brussels (Belgium)

Prof. Sophie Laurent
University of Mons (Belgium)

Prof. Robert N. Muller
University of Mons (Belgium)

Prof. Peter A. Rinck
EMRF (France)

Prof. Eva Toth
University of Orléans (France)

ORGANIZING COMMITTEE

Prof. Serge Goldman

Prof. Sophie Laurent

Prof. Robert N. Muller

Prof. Peter A. Rinck

LOCAL ORGANIZING COMMITTEE

Sébastien Boutry

Yves Gossuin

Céline Henoumont

Émilie Hequet

Lionel Larbanoix

Dimitri Stanicki

Thomas Vangijzegem
This meeting will celebrate two anniversaries since it will be 40 years after the first proposal and description of MR contrast agents by Paul Lauterbur and 30 years after the first conference we organized on (MR) contrast agents.

The topics covered will encompass the various aspects of the contrast enhancement in MRI:

- molecular and nanoparticulate contrast agents
- CEST techniques
- hyperpolarized tracers
- theranostics
- ....

Well-known experts will contribute to the program and proffered contributions, selected by the scientific committee, will be included either as oral or as poster communications.

Young researchers will be offered large opportunities to show and discuss their own work.
THURSDAY MAY 9, 2019

08:30 – 09:00 Coffee
09:00 – 09:15 Welcome Address - R.N. Muller, (Belgium)

SESSION 1
Chairman: J. Peters, (The Netherlands)
09:15 – 09:45 MR Imaging: Quo Vadis? - P. Rinck, (France)
09:45 – 10:15 Optimizing the Rotational Dynamics of Gd(III)-Based Contrast agents: a 30 Years Long Journey - M. Botta, (Italy)
10:15 – 10:45 Coffee break / Poster session

SESSION 2
Chairman: Y. Gossuin, (Belgium)
10:45 – 11:15 MRI and CEST: From ParaCEST to DiaCEST - C.F.G.C. Geraldes, (Portugal)
11:15 – 11:45 Design and Testing of Frequency-Encoding MRI Reporters - S. Aime, (Italy)
11:45 – 12:00 The Influence of the Aminomethylphosphinic Pendant arm of DO3APR on Properties of its Lanthanide(III) Complexes - P. Urbanovský, (Czech Republic)
12:00 – 13:15 Lunch / Poster session

SESSION 3
Chairman: M. Botta, (Italy)
13:15 – 13:45 The Proton Exchange as an Additional Route to Enhance the Relaxivity of Paramagnetic MRI Contrast Agents - Z. Baranyai, (Italy)
13:45 – 14:15 Responsive MRI Agents - E. Toth, (France)
14:15 – 14:30 Fluorinated Paramagnetic Contrast Agents: Synthesis, Physico-Chemical Characterizations and Molecular Dynamic Simulations - E. Hequet, (Belgium)
14:30 – 14:45 Avoiding Gadolinium Quenching through Photoporation for Enhanced Magnetic Resonance Imaging of Cells - A. Harizaj, (Belgium)
14:45 – 15:15 Coffee break / Poster session

SESSION 4
Chairwoman: E. Toth, (France)
15:35 – 16:05 Chemical Insights into the Issues of Gd-retention in Brain and other Tissues upon the Administration of Gd-based MRI Contrast Agents - E. Gianolio, (Italy)
16:05 – 16:20 VDA Induced Necrosis in Micro-Cancers Elicits a Strategy for Early Eradication of Malignancies? - S. Wang, (Belgium)
19:00 Dinner at Maison de la Réunion, 5, rue de la Réunion, Mons
FRIDAY MAY 10, 2019

SESSION 5  
Chairman : C. Geraldes, (Portugal)  
09:30 - 10:00  Engineering of Magnetic-based Nanoplatforms for Theranostic - S. Begin, (France)  
10:00 - 10:15 PEGylated Very-Small Iron Oxide Nanoparticles (VSION) : Evidence of their Potential as T1 Contrast Agents for Magnetic Resonance Imaging - T. Vangijzegem, (Belgium)  
10:15 – 10:30 Simulation of the Nuclear Magnetic Relaxation Induced by Superparamagnetic Nanoparticles Trapped in a Biological Tissue - Q.L. Vuong, (Belgium)  
10:30 – 11:00 Coffee break / Poster session  

SESSION 6  
Chairman : S. Aime, (Italy)  
11:00 – 11:30 Bismuth Metallic Nanoparticles: From Synthesis to Diagnostic and Therapeutic and Applications - M. Port, (France)  
11:30 – 12:00 AGuIX® Theranostic Nanoparticles: From the Concepts to First in Man - O. Tillement, (France)  
12:00 – 12:30 Tracers for Imaging, Some Like them Hot - S. Goldman, (Belgium)  
12:30 – 12:45 Concluding Remarks - R. Muller, Belgium; P. Rinck, (France)  
12:45 – 13:45 Lunch  
From 14:00 Optional visit of the laboratories and/or the CMMI (on request)
Physicochemical Properties of a New Contrast Agent for Neurodegenerative Disease Diagnosis, G. Ciricelli, L. Vander Elst, R. N. Muller, S. Laurent (Belgium)

Parametric Study of Flow Processes for the Synthesis of Iron Oxide Nanoparticles in Polyol Media, S. Coyez, T. Vangijzegem, D. Stanicki, Y. Gossuin, S. Laurent (Belgium)

Synthesis of a Manganese Magnetic Resonance Imaging Contrast Agent Based on Pyclen Structure, M. Devreux, C. Henoumont, F. Dioury, M. Port, S. Laurent (Belgium, France)

Development of a paraCEST and Fluorine MRI Contrast Agent, P. Ernotte, C. Henoumont, S. Laurent (Belgium)

Functionalized Silica Nanoplatform Containing Gd(III) Complexes as Contrast Agent for 1H MRI, S. Garifo, D. Stanicki, I. Ternad, S. Laurent (Belgium)

NMR Relaxometry for the Study of Paramagnetic Ions Adsorption on Different Substrates Y. Gossuin, Q. L. Vuong (Belgium)

Metallic Bismuth Nanoparticles Synthesis from Batch to Flow Continuous Chemistry Coupled to Sonication G. Hallot, C. Gomez, A. Pastor, S. Laurent, E. Brun, C. Sicard-Roselli, M. Port (France, Belgium)


Gadolinium Chelates Incorporated in Nanohydrogels: Characterization by DOSY NMR and Relaxometry C. Henoumont, J. Moreau, V. Malytskyi, M. Callewaert, C. Cadiou, S. Laurent, F. Chuburu, S. Laurent (Belgium, France)

Pre-clinical Medical Imaging at the Center for Microscopy and Molecular Imaging L. Larbanoix, S. Boutry, R.N. Muller, S. Laurent (Belgium)

Relaxometric Properties of Saponites Bearing Ln3+ Ions in the Inorganic Framework S. Marchesi, F. Cerniato, C. Bisio, L. Marchese, M. Botta (Italy)

Synthesis of Paramagnetic Dendrimers for MRI M. Ndiaye, T. Vangijzegem, S. De Smedt, F. Sauvage, S. Boutry, L. Larbanoix, R. N. Muller, C. Cadiou, V. Malytskyi, J. Moreau, F. Chuburu, S. Laurent (Belgium, France)

Individual Retrospect on Contrast Media Research for Translational Medicine Y. Ni (Belgium)
NMR and Structural Study of Lanthanide Complexes of trans-DOTA-diamide  
J. Obuch, Z. Tošner, J. Blahut, P. Hermann (Czech Republic, France)

A New Multimodal Platform to Obtain a Versatile and Targeted MRI and Photoacoustic Contrast Agent  
V. Royer, C. Henoumont, S. Boutry, L. Larbanoix, R.N. Muller, S. Laurent (Belgium)

Changing the Length, Changing the Properties: Effect of the PEG Molecular Weight on the Pharmacokinetic Properties of VSIONs  
D. Stanicki, S. Boutry, L. Larbanoix, T. Vangijzegem, R.N. Muller, S. Laurent (Belgium)
Mons, the administrative centre of the Hainaut province, is located in a dynamic region situated at the heart of Europe, between Amsterdam and Paris on the one hand and Cologne and London on the other.

Its particularly rich and varied heritage contains 4 cultural masterpieces of humanity recognised by the UNESCO World Heritage Committee. The Belfry in Mons, which was recognized as a World Heritage site in 1999, was built between 1661 and 1672 by Louis Ledoux and Vincent Anthony. While being the only baroque Belfry in Belgium as well as having recognition from UNES-CO, it possesses a 49-bell carillon. This symbol, overlooking Mons, offers a splendid view of the rooftops of the city and of the former heaps which trace back to its mining history.

The Neolithic Flint Mines at Spienes was listed among the UNESCO World Heritage sites in 2000 and is one of the oldest and largest flint extraction sites in Europe. Located 6 km from Mons, this archaeological site covers 100 hectares. You will be able to discover the inventions and pruning techniques developed 6000 years ago by man, which today mark a major step in the cultural and technological development of mankind.

The traditional festival in Mons, known as the ‘Doudou’, was recognised in 2005 by UNESCO. The ‘Doudou’, which comprised a Procession, the ascent of the Golden Chariot, and the fight, known as the ‘Lumeçon’, is a lively tradition celebrating St Waudru, the founder of the city and St George’s battle against the Dragon, the symbol of evil.

Grand-Hornu, listed in 2012 by UNESCO as World Heritage of Humanity, is an example of the idealistic architecture characterizing the beginning of the European industrial era. As a symbol of its industrial past, the Grand-Hornu was a former mining complex which included the wells and housing of miners, and all administrative institutions necessary for the running of a community. Today it is a Museum of Contemporary Art (MAC’s), in the French-speaking Community of Belgium.

Mons and its surrounding area is also replete with a number of museums and impressive sites such as the Collegiate Church of Saint Waudru, the Town Hall, the Mayor’s Garden, the Fine Arts Museum (BAM), the PASS (Park of Scientific Adventures).

In the evening, Mons comes alive with its many bistros and quality restaurants ready to ravish the finest of palates and invite you to discover Belgian cuisine. The warm atmosphere of the bars and cafes in Mons will bring the perfect end to your sensual day.

www.visitmons.be
ACCESSIBILITY

BY CAR

Mons is situated between Paris and Brussels on the E19 motorway, exit 24.

BY TRAIN

There are two direct trains linking Brussels to Mons every hour. (Attention: «Mons» is written in Dutch: «Bergen»)

From Brussels South Airport, there is a shuttle from the airport to the Charleroi train station

On foot, Mons city centre is just an easy 15 minutes from the station
www.belgianrail.be

BY AIRPLANE

Brussels South Airport, located in Charleroi is 30 minutes from Mons by car. It serves some 100 international destinations. Ryanair, Jetairfly, Wizzair, Pegasus and Thomas Cook all offer direct flights.
www.brussels-charleroi-airport.com

Brussels Airport, the country’s main international airport, is only 50 minutes from Mons. It serves 163 short-flight destinations as well as 41 long-haul destinations.
www.brusselsairport.be

SHUTTLE

Charleroi airport - Mons: ± 40 min ± 65€ (1 à 4 pers.)

Brussels airport - Mons: ± 1h ± 90€ (1 à 4 pers.)

- Optimum Travel Service
www.service-navette.be
0032 64 22 58 98
0032 495 89 52 37

- Navette Connection
www.navette-connection.be
+32 (0) 497 450 684

- Taxi Speed
www.taxispeed.be
+32 (0) 65 980 069
+32 (0) 474 779 777

- Navettes Devos
http://navette-devos.be
+32 (0) 485 150 120

- Taxis Willy
http://taxiswillymons.be
+32 (0) 65 319 808

TAXI

- Taxis Willy: +32 (0) 475 414 455
- Taxis Top: +32 (0) 495 209 209
- Taxis Speed: +32 (0) 474 779 777
- Taxis Milie: +32 (0) 477 479 18
ACCOMMODATION

1. HOTEL LIDO MONS CENTRE ****
   Rue des Arbalestiers, 112
   7000 Mons
   www.lido.be
   info@lido.be
   +32 (0)65 32 78 00

6. ELLINIKO
   Place Léopold, 1
   7000 Mons
   www.elliniko.be
   Elliniko.mons@gmail.com
   +32 (0) 39 93 93

2. DREAM ! ****
   Rue de la Grande Triperie, 17
   7000 Mons
   http://www.hoteldream.be
   info@dream-mons.be
   +32(0)65 32 97 20

7. INFOTEL ***
   Rue d’Havré, 32
   7000 Mons
   www.hotelinfotel.be
   info@hotelinfotel.be
   +32 (0)65 40 18 30

3. IBIS MONS CENTRE GARE ***
   Boulevard Charles-Quint, 27bis
   7000 Mons
   https://www.accorhotels.com
   ibismons@monshotels.be
   +32 (0)65 847 440

8. ST JAMES ***
   Place de Flandre, 8
   7000 Mons
   www.hotelstjames.be
   hotelstjames@hotmail.com
   +32 (0)65 72 48 24

4. MONS DRAGON HOUSE
   Rue de la Grande Triperie, 7
   7000 Mons
   www.monsdragonhouse.be
   info@monsdragonhouse.be
   +32 (0)491 08 02 35

9. VAN DER VALK
   Avenue Mélina Mercouri, 7
   7000 Mons
   www.hotelmons.eu
   info@hotelmons.eu
   32 (0) 65 390 207

5. COMPAGNONS 11
   Rue des Compagnons 11
   7000 Mons
   www.compagnons11.be
   info@compagnons11.be
   +32 (0)499 99 76 60
   +32 (0)65 39 02 07
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GENERAL INFORMATION

POSTERS

Posters will be exposed in the hall of the « centre Vésale »

REGISTRATION

Registration fees include admission to the conference, welcome pack, coffee-breaks and lunches. The gala dinner is optional.

Only those participants who have paid their registration fees will be allowed in.

Proof of student/PhD status will be checked upon arrival for registration

Participants are requested to wear their identification tags during the conference.

SOCIAL EVENT

Coffee-breaks and lunches will be served in the hall of the « Centre Vésale »

There are no shops on the campus but the campus is not far away from the city centre.

The gala dinner is planned on Thursday 7:00 PM and will take place at the “Maison de la Réunion”

5 rue de la Réunion
7000 Mons
0032 65 33 93 23

LOCATION

UMONS
Campus de la Plaine de Nimy
Centre Vésale
Avenue du Champs de Mars
7000 Mons

See below or on https://web.umons.ac.be/fr/plan-des-campus/

WI-FI

UMONS-EVENT
welcome-to-umons
Avenue du Champ de Mars - 7000 Mons