



**9<sup>th</sup> ESMRMB-GREC**  
**ESMRMB Pre-Congress meeting**  
**Tuesday, 2<sup>nd</sup> October 2024**

Palau de Congressos de Barcelona, Av. de la Reina María Cristina, s/n,  
Sants-Montjuïc, 08004 Barcelona  
Barcelona, Spain

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**ESMRMB-GREC Meeting: Scientific Program**

**Meeting venue:** Palau de Congressos de Barcelona, Av. de la Reina María Cristina, s/n,  
Sants-Montjuïc, 08004 Barcelona

**ESMRMB office:** [office@esmrm.org](mailto:office@esmrm.org)

**Certification:** Participants will receive a certificate of attendance

**Enrolment:** The meeting in presence is designed for scientists and consultants.

**Local Organisation:** Àlex Rovira (ES)

After an extraordinary year of achievements, it is our pleasure to invite you to the 9th ESMRMB-GREC meeting, to be held in Barcelona, Spain, during the ESMRMB Pre-Congress day.

**Introduction:**

This meeting is designed as a unique context aimed at sharing ideas and data on MRI contrast agents research and possible gadolinium toxicity after the administration of gadolinium-based contrast agents (GBCA). Joint international efforts will remain essential to optimize diagnostic efficacy and improve patient safety in MR imaging. Since 2016, the ESMRMB-GREC has adapted the contents of the discussion to current hot topics and has continuously improved its influence on the clinical and pre-clinical role of gadolinium-based contrast agents.

This 9<sup>th</sup> GREC meeting will cover topics related to the four missions of the group: 1. Clinical indications and optimal use of GBCA-enhanced MRI; 2. The chemistry of improved MRI contrast agents; 3. Optimizing contrast-enhanced MRI, including Artificial Intelligence; 4. Emissions and ecotoxicological effects of GBCA in the marine environment.

As a working group of experts with multidisciplinary background, we support the MR community with continuous education, information and scientific updates on the use and clinical applications of GBCA.

**Objectives:**

- To share evidence-based state-of-the-art information on specific hot and emerging topics in GBCA-enhanced MR imaging
- To promote the dissemination of knowledge by means of papers to be published on behalf of the ESMRMB-GREC working group
- To discuss on research activities and research funding opportunities

## Wednesday, 2<sup>nd</sup> October 2024

**08:00-08:05**      **Welcome and practical meeting issues**  
*Àlex Rovira, ES*  
*Carlo C. Quattrocchi, IT; Aart J. van der Molen, NL*

**Session 1**      **GREC Business Meeting 2024**  
*Moderator: Carlo C. Quattrocchi, IT*

08.05-08.15      Mission Group 1: Achievements 2023-2024 and new ideas (Àlex Rovira, ES)  
08.15-08.25      Mission Group 2: Achievements 2023-2024 and new ideas (Eliana Gianolo, IT)  
08.25-08.35      Mission Group 3: Achievements 2023-2024 and new ideas (Juan Hernandez Tamames, NL)  
08.35-08.45      Mission Group 4: Achievements 2023-2024 and new ideas (Aart van der Molen, NL)

**08.45-09:00**      **Discussion**

**Mission 1**      **Clinical Indications and Optimal Use of GBCA-enhanced MRI**  
**Session 2**      *Moderator: Alex Rovira, ES*

09:00-09:10      Indications for late gadolinium enhancement (LGE) imaging (Carlo Mallio, IT)  
09:10-09:20      Indications for GBCA in the diagnosis and monitoring of the ear and internal auditory canal – with ESHNR. (Marinella Neri, IT)  
09:20-09:30      Indications for GBCA in brain tumours – with ESNR (Fabio Doniselli, IT; Àlex Rovira, ES)  
09:30-09:40      Use of GBCAs in diagnosis and monitoring Multiple Sclerosis (2015-2022). (Sofia Sceppacuercia, ES; Àlex Rovira, ES)

**09.40-10:00**      **Discussion**

**10:00- 10:30**      **Coffee break**

**Mission 2**      **The Chemistry of Improved MRI Contrast Agents**  
**Session 3**      *Moderator: Eliana Gianolo, IT*

10:30-10:45      GBCA Hypersensitivity reactions and Allergologic workup (Anca Chiriac, FR)  
10:45-11:00      How to increase the relaxivity of GBCA (Eliana Gianolo, IT)  
11:00-11:15      GBCA uptake by blood cells (Nico Ruprecht, CH)

**11.15-11.30**      **Discussion**

**Mission 3**      **Optimizing Contrast-Enhanced MR Imaging: Advances in GBCA**  
**Session 4**      *Moderators: Carlo C. Quattrocchi, IT; Aart J. van der Molen, NL*

11.30-11:50      Gadoquatrane, a novel tetrameric macrocyclic GBCA: Profile and data from preclinical and clinical studies. (Laura Schoekel, Petra Palkowitsch, Hubertus Pietsch; Bayer AG)  
11:50-12:10      TBC  
12:10-12:30      Hyperpolarized carbon-13 (C13) imaging as the future of MRI. (Anand Bherwani, GE)  
12:30-12:50      Stability and safety of current and new approved GBCAs. (Sarah Catoen, Jean-Sébastien Raynaud; Guerbet)

**12.50-13.00**      **Discussion**

**13:00-13:45**      **Lunch time and open discussion**

**Mission 3**      **Optimizing Contrast-Enhanced MR Imaging**

**Session 4**      *Moderator: Aart van der Molen, NL*

- 13:45-14:00      Manganese as a contrast agent for liver imaging (Torkel Brismar, SW)  
 14:00-14:15      Enhancing Safety: Optimized Parameters and Sequences for Reducing Gadolinium Dosage (Alvaro Dominguez, GE Healthcare)  
 14:15-14:30      Optimal MRI Parameters of Gd-enhanced MRI at lower GBCA-dose for the fields Below 1T. (Cristiana Araujo, Siemens)  
 14:30-14:45      Optimized MRI techniques for low GBCA-dose MRI (Maarten Versluis, Philips)

14:45-15:00      **Discussion**

- 15:00-15:10      Experiences on AI in GBCA use at University of Essen (Johannes Haubold, DE)  
 15:10-15:20      Gadolinium-free MRI in brain tumors (Juan Hernández Tamames, NL)

15:20-15:45      **Discussion**

15:45- 16:15      **Coffee break**

**Mission 4**      **Emissions and Ecotoxicological Effects of GBCA in the Marine Environment**

**Session 5**      *Moderator: Gerard Stroomberg, NL*

- 16:15-16:30      Speciation analysis of GBCAs in water samples and organs (Mathis Athmer, DE)  
 16:40-16:50      MEGADORE experience (Douraid Ben Salem, FR)  
 16:50-17:00      Reducing contrast agent residuals in hospital wastewater: the GREENWATER study (Moreno Zanardo, IT)  
 17:00-17:10      Ecotoxicological effects of GBCA and Gd (Julia Farkas, NO,)  
 17:10-17:20      Sustainable Radiology: reduction of contrast media in hospital wastewater (Lucas Kuster, Max Carter, Nina Breedijk, Tiago Rijdsdijk, NL)

17:20-17:30      **Discussion**

**Dessert**      **ESMRMB-GREC meets.....**

**Session 6**      *Moderator: Aart van der Molen, NL*

- 17:30-17:45      ESMRMB-GREC meets ESUR-CMSC: Grade III-IV hypersensitivity reactions to GBCA: skin tests and how to empirically change the contrast agent (Oliver Clement, F)  
 17:45-18:00      ESMRMB-GREC meets SMRA: Future directions of contrast-enhanced MR (Giles Roditi, UK)

18:00-18:10      **Discussion**

- 18:10-18:20      Adjourn of GREC 2024  
 Enjoy 2024 ESMRMB congress and see you next year

### **ESMRMB-GREC Chairs**

Carlo C. Quattrocchi, IT - [carlo.quattrocchi@unitn.it](mailto:carlo.quattrocchi@unitn.it)

Aart J. van der Molen, NL - [a.j.van\\_der\\_molen@lumc.nl](mailto:a.j.van_der_molen@lumc.nl)

### **ESMRMB-GREC Senior Faculty**

Aart J. Nederveen, NL  
Carlo C. Quattrocchi, IT  
Aart J. van der Molen, NL  
Alex Rovira, ES  
Alexander Radbruch, DE  
Cristina Lavini, NL  
Eliana Gianolio, IT  
Carlo A. Mallio, IT  
Geir Ringstad, NO  
Anders Tisell, SE  
Astrid Jeibmann, DE  
Gerard Stroomberg, NL  
Henning Richter, CH  
Dario Livio Longo, IT  
Joana Ramalho, PT  
Josef Vymazal, CZ  
Maria Eduarda Pereira, PT  
Miguel Ramalho, PT  
Olivier Clement, FR  
Rosa Freitas, PT  
Sirio Coccozza, IT  
Tarek Yousry, UK  
Tobias Granberg, SE  
Uwe Karst, DE  
Giovanni Libralato, IT  
Ilona A. Dekkers, NL  
Douraid Ben Salem, F  
Eva Jakob-Toth, F  
Marinella Neri, IT  
Andrea Falzone, IT

### **ESMRMB-GREC Junior Faculty**

Federica Spani, IT  
Marco Parillo, IT  
Katerina Deike-Hofmann, DE  
Robert Haase, DE  
Marcel Macke, DE  
Christine Verlemann, DE  
Torben Maas, DE  
Fabio Doniselli, IT  
Ivar Wamelink, NL  
Michael Stringer, UK  
Ruben van Oosterhoudt, NL  
Mihály Braun, HU  
Irena Wysocka, PL  
Mirjam Gerwing, DE

### **ESMRMB-GREC Industry Delegates**

Laura Schoeckel – Bayer AG  
Hubertus Pietsch – Bayer AG  
Petra Palkowitsch – Bayer AG  
Alberto Spinazzi – Bracco  
Antonella Filippone – Bracco  
Anand Bherwani – GE HealthCare  
Jean-Sebastien Raynaud – Guerbet  
Sarah Catoen – Guerbet  
Eric Lancelot – Guerbet  
Alvaro Domínguez – GE Healthcare MRI  
Labeeb Kozhikkavil – Siemens  
Cristiana Araujo – Siemens  
Maarten Versluis – Philips

### **Institutional Scientific Patronage from ESMRMB**

**Unconditional support from Bayer AG, Bracco, GE Healthcare and Guerbet**



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