



7th ESMRMB-GREC meeting

November 10-11th, 2022
Rome ITALY

ESMRMB-GREC Meeting: Scientific Program

Date: November 10-11th 2022

Meeting venue: Sala Congressi Mancini Park Hotel, via di Valleranello, 67, Rome, Italy

Certification: Participants will receive a certificate of attendance

Enrolment: The meeting in presence is designed for scientists and consultants. Educational event is broadcasted for registered participants.

Local Organisation: Carlo C. Quattrocchi (IT)

Following three consecutive on-line meetings, it is our pleasure to invite you to the 7th ESMRMB-GREC meeting, to be held in Rome, Italy. This year the meeting will be in presence again!

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 (GBCAs). We believe that 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 evolved in style even in difficult circumstances imposed by the pandemic restrictions.

This 7th GREC meeting will cover topics that have emerged in the last year regarding: 1. Clinical indications and safety of GBCA-enhanced MRI; 2. The chemical approach to improved MRI-contrast agents; 3. Alternative methods to GBCA-enhancement using artificial intelligence methods; 4. Emissions of GBCAs into the aquatic environment.

GBCAs are a mainstay of clinical MR imaging in the real life. 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 GBCAs. For this reason, a 1-hour-long educational and interactive session will be streamed as a webinar to reach the larger MRI community of the ESMRMB and beyond.

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 the ESMRMB-GREC working group
- To discuss on research activities and research funding opportunities

Thursday, 10 November 2022

08:00-08.05	Welcome and practical meeting issues <i>Aart J. Nederveen, NL & Carlo C. Quattrocchi, IT</i>
08:05-08:30	ESMRMB-GREC Working Rules GREC Mission Groups Candidates for the position of Chair (end of the current mandate)
Mission 1 Session 1	<i>Clinical Indications and Safety of GBCA-enhanced MRI</i> <i>Moderator: Aart J. Nederveen, NL</i>
08:30-08:45	Role of Gadolinium-contrast enhancement into the current RADS scoring systems (Marco Parillo, IT)
08:45-09:00	GREC Discussion
09:00-09:15	Recommendations on the use of gadolinium-based contrast agents in the diagnosis and monitoring of multiple sclerosis (Alex Rovira-Canellas, ES; Fabio Doniselli, IT)
09:15-09:30	GREC Discussion
09:30-09:45	LEADER-75 Study (Cornelia Harz, DE)
09:45-10:00	Quantitative assessment of the gadolinium distribution in bone samples by mass spectrometric imaging (Christine Verlemann, DE)
10:00-10:15	Gadolinium reduction in clinical research from current to new GBCAs (Jean-Sébastien Raynaud, FR)
10:15-10:30	Questions and remarks
10:30- 10:45	Coffee break
Mission 4	<i>Emissions of GBCAs into the aquatic environment</i> <i>Moderator: Gerard Stroomberg, NL</i>
10:45-11:00	Rapid speciation analysis of Gadolinium-based contrast agents: From humans to the aquatic environment and back (Marcel Macke, DE; Torben Maas, DE; Uwe Karst, DE)
11:00-11:15	GREC Discussion
11:15-11:30	Evaluation of the teratogenic risk associated to gadolinium by the Hydra vulgaris regeneration assay (Massimiliano Scalici, IT)
11:30-11:45	Aquatic ecotoxicity of gadolinium (Giovanni Libralato, IT)
11:45-12:00	First assessment of gadolinium in Posidonia beach casts (Stefania Chiesa, IT)
12:00-12:15	Questions and remarks

Educational Live Stream (Thursday, 10 november 2022)

Moderator and discussant: *Cristina Lavini, NL*

12:30-12:50	Safety - The ESUR - Contrast Media Safety Committee guidelines: old and new recommendations for the safe use of GBCAs (Olivier Clement, FR)
12:50-13:10	Quality - High Relaxivity Macrocyclic GBCAs: the new frontier of MRI contrast enhancement (Carlo C. Quattrocchi, IT)
13:10-13:30	Apps for Gd - Neurofluids: what we have learned and what we expect from gadolinium-enhanced imaging (Nivedita Agarwal, IT)

13:30- 14:30 Lunch time and open discussion

Friday, 11 November 2022

Mission 1 ***Clinical Indications and Safety of GBCA-enhanced MRI***
Session 2 *Moderator: Carlo C. Quattrocchi, IT*

08:30-08:45	Exposure to gadolinium in normal renal function and skin toxicity: current status of preclinical and clinical studies (Carlo Augusto Mallio, IT)
08:45-09:00	GREC Discussion
09:00-09:15	Gadolinium use reduction strategies in the clinical setting: state-of-the-art – ESUR-CMSC joint initiative (Ilona A. Dekkers, NL; Aart J. Van Der Molen, NL)
09:15-09:30	GREC Discussion
09:30-09:45	GLIOCARE: Glioma Imaging Omitting Contrast through Artificial Intelligence and Risk Evaluation (Ivar Wamelink, NL)
09:45-10:00	Long-term Gd retention in healthy rat brain: comparison between gadopichlenol, gadobutrol and gadodiamide, (Jean-Sébastien Raynaud, FR)
10:00-10:15	MultiCriteria Decision Analysis (MCDA): a model for selection of GBCA (Emilio Moreno Carretero, ES)
10:15-10:45	Questions and remarks
10:45- 11:00	Coffee break

Mission 2 ***The chemical Approach to Improved MRI-Contrast Agents***
Moderator: Silvio Aime, IT

11:00-11:15	Innovative Contrast Agents as an alternative to GBCAs: a perspective (Eliana Gianolio, IT)
11:15-11:30	GREC Discussion
11:30-11:45	Increasing Relaxivity to reduce GBCA doses: the current approaches (Lorenzo Palagi, IT)
11:45-12:00	GREC Discussion
12:00-12:15	The Clinical Value of Physicochemical Properties of Gadolinium-Based Contrast Agents (Antonella Filippone, IT)
12:15-12:30	Current research on high-relaxivity GBCAs (Hubertus Pietsch, DE)

12:30-13:00 Questions and remarks

13:00- 14:00 Lunch time and open discussion

Mission 3 *Alternative Methods to GBCA-enhancement (the AI approach)*

Moderator: Carlo Augusto Mallio, IT

14:00-14:15 Reduction of gadolinium with Artificial Intelligence: where do we stand and what is the potential (Katerina Deike-Hoffmann, DE)

14:15-14:30 GREC Discussion

14:30-14:45 Do we already have virtual gadolinium? we use a third of gad in Bonn.
(Alexander Radbruch, DE)

14:45-15:00 Questions and remarks

15:00-16:00 Final proposal of GREC chairs to be approved by the ESMRMB Executive Board
Adjourn: See you at the 2023 ESMRMB congress in Basel

ESMRMB-GREC Chairs

Aart J. Nederveen, NL - a.j.nederveen@amsterdamumc.nl

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ESMRMB-GREC Senior Faculty

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Olivier Clement, FR

Ilona A. Dekkers, NL

Rosa Freitas, PT

Eliana Gianolio, IT

Tobias Granberg, SE

Astrid Jeibmann, DE

Uwe Karst, DE

Cristina Lavini, NL

Carlo A. Mallio, IT

Aart J. Nederveen, NL

Maria Eduarda Pereira, PT

Carlo C. Quattrocchi, IT

Alexander Radbruch, DE

Joana Ramalho, PT

Miguel Ramalho, PT

Henning Richter, CH

Geir Ringstad, NO

Alex Rovira Canellas, ES

Massimiliano Scalici, IT

Gerard Stroomberg, NL

Anders Tisell, SE

Aart J. Van der Molen, NL

Josef Vymazal, CZ

Tarek Yousry, UK

ESMRMB-GREC Junior Faculty

Sirio Cocozza, IT

Katerina Deike-Hofmann, DE

Fabio Doniselli, IT

Robert Haase, DE

Giovanni Libralato, IT

Marcel Macke, DE

Torben Maas, DE

Marco Parillo, IT

Federica Spani, IT

Christine Verlemann, DE

Ivar Wamelink, NL

ESMRMB-GREC Industry Delegates

Cornelia Harz – Bayer AG

Hubertus Pietsch – Bayer AG

Laura Schöckel – Bayer AG

Alberto Spinazzi – Bracco

Antonella Filippone – Bracco

Emilio Moreno Carretero – GE HealthCare

Anand Bherwani – GE HealthCare

Jean Sebastien Raynaud – Guerbet

Eric Lancelot – Guerbet



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