



## E-GREC MEETING 2017

### Gadolinium retention in the body: Updates from the european network

This meeting is designed as a unique context aimed to share data, updates and ideas on gadolinium deposition in human tissue and possible gadolinium toxicity after the administration of gadolinium-based contrast agents. We believe that joint international efforts are mandatory in order to improve patient safety during Magnetic Resonance Imaging procedures.

In March, 2017 the Pharmacovigilance Risk Assessment Committee (PRAC) of the European Medicines Agency (EMA) recommended the suspension of the marketing authorization for some linear gadolinium-based MRI contrast agents based on the research indicating greater residual gadolinium retention with these agents. In July 2017, after re-evaluation of the scientific data, this recommendation was upheld by the PRAC and subsequently endorsed by the Committee for Medicinal Products for Human Use (CHMP) of EMA. In contrast, based on a review published on May 22, the U.S. Food and Drug Administration (FDA) concluded that it was not necessary to place any new restrictions on gadolinium contrast products. Despite the recognition that linear gadolinium agents are responsible for depositing more than macrocyclic agents, no health effects were associated with either class of agents regarding gadolinium deposition.

Well-designed retrospective and prospective studies on gadolinium toxicity are lacking, and the creation of knowledge through research remains essential to better determine the long-term effects of GBCA exposure. In this setting the involved participants will give their critical expert opinion and suggest improved and reproducible methodological approaches for new studies.

An update of gadolinium deposition literature and ongoing research will be presented.

Issues on methods of data sharing, harmonization and integration among different institutions across Europe and abroad will also be discussed.

# PROGRAM

## Friday, 3. November 2017

18:00-22:00h Welcome to the guests and dinner

## Saturday, 4. November 2017

08:00h Attendees desk opening

08:30-08:40h Welcome and practical meeting issues

### **Session 1 Background review talks on gadolinium retention**

08:40-09:00h **Update on clinical literature in gadolinium retention in the adult brain**  
Alex Rovira (ES)

09:00-09:20h **Update on clinical literature in gadolinium retention in children. There are any differences in pediatric population?**  
Carlo Quattrocchi (IT)

09:20-09:40h **Update on preclinical literature in gadolinium retention in the brain**  
Hubertus Pietsch (DE)

09:40-10:00h **What is new about gadolinium deposition outside the brain?**  
Aart van der Molen (NL)

10:00-10:20h **Insights from animal studies on what happens when GBCAs enter the body. Step by step *in vivo* chemistry of gadolinium contrast agents**  
Silvio Aime (IT)

10:20-10:40h **The impact of gadolinium retention in clinical practice**  
Tarek Yousry (UK)

10:40-11:00h **Questions and discussion**

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11:00-11:20h Coffee break

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## **Session 2** Updates on current research on gadolinium retention, deposition and toxicity – Accepted, submitted papers and ongoing research by E-GREC members

- 11:20-11:30h Carlo C. Quattrocchi (IT)
- 11:30-11:40h Alexander Radbruch (DE)
- 11:40-11:50h Tobias Granberg (SWE)
- 11:50-12:00h Joana Ramalho (PT)
- 12:00-12:10h Josef Vymazal (CZ)
- 12:10-12:20h Questions and discussion

## **Session 3** Updates from contrast media industry

- 12:20-12:40h Update on activities @ GE Healthcare  
Paul Evans (UK)
- 12:40-13:00h Update on activities @ Bracco Imaging  
Antonella Filippone (IT)
- 13:00-13:20h Update on activities @ Bayer Healthcare  
Thomas Balzer (DE)
- 13:20-13:40h Update on activities @ Guerbet  
Jean-Sebastien Raynaud (FR)
- 13:40-14:00h Questions and discussion

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14:00-15:00h Lunch

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15:15h **Informal get-together**

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19:30h **Dinner**

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## **Sunday, 5. November 2017**

08:30-08:40h Welcome and practical meeting issues

## **Session 4** Possible toxic effects on gadolinium deposition

- 08:40-09:00h Background of EMA Recommendations  
Olivier Clement (FR)
- 09:00-09:20h Possible neurological symptoms associated with gadolinium retention  
Josef Vymazal (CZ)
- 09:20-09:40h Gadolinium-induced toxicity  
Richard Semelka (USA)
- 09:40-10:10h Questions and discussion

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10:10-10:30h Coffee break

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### **Session 5 E-GREC research guidelines**

10:30-10:50h **Concept guideline for performing clinical studies**  
Carlo Quattrocchi (IT) and Alexander Radbruch (DE)

10:50-11:10h **Concept guideline for performing preclinical studies**  
Jean-Sebastien Raynaud (FR)

11:10-11:40h **Discussion and guideline finalization**

### **Session 6 E-GREC future**

11:40 -12:00h **Roundtable future E-GREC: Funding, grants, website**  
Carlo Quattrocchi (IT)

12:00-12:20h **Planning for future actions and participation**  
Aart van der Molen (NL)

12:20-12:50h **Discussion**

12:50-13:00h **Meeting adjourn**

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13:00-14:00h Lunch

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## **Objectives**

- **To present state of the research on gadolinium deposition and potential toxicity;**
- **Guidelines for performing preclinical and clinical research in this field;**
- **Develop new methodological approaches and foster scientific collaboration between European and non-European institutions.**

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### Meeting Coordinators

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### Scientific Sponsors



Sociedade Portuguesa de  
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& EVENT MANAGEMENT

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