

# XIV International Magnesium Symposium

President: *Federica I Wolf*



## MAGNESIUM IN HEALTH AND DISEASE

Roma, Villa Malta - June 23-24, 2016

### PROGRAM & ABSTRACTS

Organizing Committee:

*André Mazur - Rhian Touyz - Federica I Wolf*



SDRM The International Society for the Development of Research on Magnesium



## Thursday June 23<sup>rd</sup>, Morning

09:00 – 09:45 **Registration (Sala Musica)**

09:45 - 10:00 **Welcome Remark** *Federica I Wolf (Rome, Italy) (Sala Curci)*

### **SESSION 1 Magnesium homeostasis, status and epidemiologic data**

**Chairmen:** *André Mazur (Clermont-Ferrand, France)*  
*Federica I Wolf (Rome, Italy)*

10:00 -10:30 **Kidney, the key organ of Mg homeostasis**  
*René Bindels (Nijmegen, Netherlands)*

10:30 - 11:00 **Magnesium status evaluation: Where we are now and what is the future?**  
*André Mazur (Clermont-Ferrand, France)*

11:00 - 11:30 **Magnesium deficiency and diseases**  
*Qi Dai (Nashville, USA)*

11.30-11.45 **OC01 – Oral Communication**  
**Proposed Guidance for the Determination of Status Indicators and Dietary Requirements for Magnesium**  
*Forrest H. Nielsen (Grand Forks, USA)*

### **Breaking News session:**

11.45-12.15 **Daily magnesium fluxes regulate cellular timekeeping and energy balance**  
*Gerben van Ooijen (Edinburgh, UK)*

12:15- 13:30 **Welcome buffet Lunch (villa Malta garden)**





## Thursday June 23<sup>rd</sup>, Afternoon

### **SESSION 2**      ***Magnesium in Cardiovascular Diseases***

**Chairmen:**      ***Andrea Rosanoff (Pahoa,, USA)***

***Rhian Touyz (Glasgow, UK)***

13:30- 14:00      **Magnesium and cardiovascular biology in health and disease**

***Rhian Touyz (Glasgow, UK)***

14:00 - 14:30      **Dietary Mg and Cardiovascular Diseases**

***Jorge Salas-Salvadò (Reus, Spain)***

14:30 – 15:00      **Dietary Mg and Stroke**

***Kathryn M Rexrode (Boston, USA)***

15.00-15.30      **Magnesium in Coronary Calcification: An Epidemiologic Approach**

***Adela Hruby (Boston, USA)***

15:30-15:45      **OC02 - Oral Communication**

**Magnesium Supplementation and Mg transporters in pre-hypertensive subjects**

***Mariana R Rodríguez (Durango, México)***

15.45 – 16:15      **Coffee/Tea Break around *Posters* (Sala Archivio)**





## **SESSION 3      *Magnesium in Metabolic Diseases***

**Chairmen:**      *Fernando Guerrero-Romero (Durango, Mexico)*  
                      *Andrea MP Romani (Cleveland, USA)*

16:15 – 16.45      **Mg<sup>2+</sup> Deficiency results in increased intra-hepatic Cortisol levels through NF-kB translocation and Inflammatory Cytokines Production**

*Andrea MP Romani (Cleveland, USA)*

16:45 – 17:15      **Magnesium in Metabolic syndrome**  
*Ka He (Bloomington, USA)*

17:15 – 17.45      **Mg obesity and metabolic disease**  
*Fernando Guerrero-Romero (Durango, Mexico)*

17:45-18.00      **OC03 - Oral Communication**  
**Effect of Magnesium Supplementation on Glucose Metabolism: a Systematic Review and Meta-Analysis of Double-Blind Randomized Controlled Trials**  
*Nicola Veronese (Padova, Italy)*

18.00-18.15      **OC04 - Oral Communication**  
**Magnesium Supplementation and Counseling on Glycemic and Genomic Outcomes Among Overweight Pregnant Women**  
*Simin Liu (Los Angeles, USA)*

18.15-18.30      **OC05 - Oral Communication**  
**Chronic Exercise Down-regulates Expression of Magnesium-Responsive Genes in Blood Cells of Diabetic Patients**  
*Fu-Chou Cheng (Taichung, Taiwan)*





## Friday June 24<sup>th</sup>, Morning

### **SESSION 4**      **Magnesium in Chronic Diseases**

**Chairmen:**      *René Bindels (Nijmegen, Netherlands)*  
                         *Rhian Touyz (Glasgow, UK)*

08:30 – 09:00      **Magnesium and chronic kidney disease**  
                         *Ziad A Massy (Paris, France)*

09:00-09:15      **OC06** - Oral Communication  
                         **TRPM7 kinase domain modulates macrophages and T-lymphocytes infiltrated in kidneys and spleens induced by aldosterone and salt treatment**  
                         *Francisco J Rios (Glasgow, United Kingdom)*

### **SESSION 5**      **Magnesium in Neuropathology and Stress**

**Chairmen:**      *Mihai Nechifor (Iasi, Romania)*  
                         *Robert Vink (Adelaide, Australia)*

09:15 – 09:45      **Magnesium in CNS**  
                         *Robert Vink (Adelaide, Australia)*

09:45- 10:15      **Mg and depression**  
                         *Miguel Angel Martínez-González (Pamplona, Spain)*

10:15– 10:45      *Coffee Break around **Posters***

10:45- 11:15      **Magnesium in anxiety and depression: lesson from a rodent model**  
                         *Ewa Poleszak (Lublin, Poland)*

11:15 – 11:45      **Magnesium treatment and stress**  
                         *Elena S Akarachkova (Moscow, Russia)*

11:45-12:00      **OC07-** Oral Communication  
                         **The effects of magnesium supplementation on subjective stress and anxiety: A systematic review**  
                         *Louise Dye (Leeds, UK)*





12.00- 12.15

**OC08** - Oral Communication  
**Magnesium in addictions**  
*Mihai Nechifor (Iasi, Romania)*

12:15 - 13:30

*Buffet Lunch (Villa Malta Garden)*

## Friday June 24<sup>th</sup>, Afternoon

### **SESSION 6**      **Magnesium in Inflammation, Immunity and Cancer**

**Chairmen:**

*Michael J Lenardo (Bethesda, USA)*  
*Jeanette AM Maier (Milano, Italy)*

13:30 - 14:00

**Inflammation**  
*Jeanette AM Maier (Milano, Italy)*

14:00 - 14:30

**Role for Mg<sup>2+</sup> in immune cell metabolism revealed by MagT1 immunodeficiency**  
*Michael J Lenardo (Bethesda, USA)*

14:30 - 15:00

**TRPM7 and its dual action in cancer**  
*Halima Ouadid-Ahidouch (Amien, France)*

15.00 - 15.15

**OC09** - Oral Communication  
**Magnesium modulates doxorubicin activity through drug lysosomal sequestration and trafficking**  
*Valentina Trapani (Rome, Italy)*

15.15 - 15.30

**OC10** - Oral Communication  
**New Targeted Fluorescent Sensors For the Study of Intracellular Magnesium Distribution and Mobilization**  
*Daniela Buccella (New York, USA)*

15:30 – 16.00

*Coffee/Tea break around **Posters** (Sala Archivio)*





## **SESSION 7      *Magnesium in Gender Medicine***

**Chairmen:**            ***Marie José Laires*** (*Lisboa, Portugal*)  
                              ***Halima Ouadid-Ahidouch*** (*Amien, France*)

16:00 – 16.30        **Mg in pregnancy and childbirth**  
                              ***Motti Hallak*** (*Hadera, Israel*)

16:30 – 17.00        **Mg and Osteoporosis**  
                              ***Ailsa A Welch*** (*Norwich, UK*)

17.00 – 17:15        **OC11 - Oral Communication**  
                              **TRPM7 and MagT1 are critical in the osteogenic differentiation of human bone Mesenchymal Stem Cells**  
                              ***Sara Castiglioni*** (*Milano, Italy*)

17:15 – 17:30        **OC12 - Oral Communication**  
                              **Magnesium and its effect on human osteoclasts and osteoblasts differentiation**  
                              ***Bérengère Luthringer*** (*Geesthacht, Germany*)

**17:30 – 17:45      *Award Nomination and Closing Ceremony***

**Chairmen:**            ***André Mazur*** (*Clermont-Ferrand, France*),  
                              ***Rhian Touyz*** (*Glasgow, UK*)  
                              ***Federica I Wolf*** (*Rome, Italy*)

