

PROMOTED BY



FONDAZIONE
INTERNAZIONALE
MENARINI



3RD INTERNATIONAL SYMPOSIUM ON:
**THE CALCIUM
SENSING
RECEPTOR
(CASR)**

**Palazzo Ximènes
Panciaticchi
Florence (Italy)**

May 11th - 13th
2017



FINAL PROGRAM

ORGANIZED BY:

**UNIVERSITY
OF FLORENCE**
Florence, Italy

**MEDICAL
UNIVERSITY
OF VIENNA**
Vienna, Austria

**UNIVERSITY
OF OXFORD**
Oxford, UK

**UNIVERSITY
OF CALIFORNIA**
San Francisco CA, USA

The symposium will bring together basic, translational and clinical scientists from different disciplines who study the molecular biology, physiology and pathophysiology of the CaSR and clinical disorders of CaSR function.

The program will feature recent research on the role of the CaSR in e.g. skeletal physiology, vascular calcification, pulmonary function, neuronal injury, parathyroid physiology, mineral metabolism, exocrine and transport functions in the gut and kidney, skin biology and cancer cell signalling. Clinical uses of CaSR modulators to treat human disorders, structural and signaling aspects of the CaSR and interactions between the CaSR and other GPCRs will be highlights.

The program will include lectures from keynote speakers, oral presentations, poster discussion sessions and forums for young investigators to meet senior experts.

**Maria Luisa Brandi, Enikő Kállay,
Rajesh V. Thakker and Wenhan Chang**
Co-Presidents of the Symposium

*Presidenza del Consiglio
dei Ministri*

Ministero della Salute

REGIONE
TOSCANA



UNIVERSITÀ
DEGLI STUDI
FIRENZE



Azienda
Ospedaliero
Universitaria
Careggi



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INTERNATIONAL SCIENTIFIC COMMITTEE

- Hans Bräuner-Osborne
- Michael T. Collins
- Arthur Conigrave
- Rachel I. Gafni
- Edward F. Nemeth
- Dolores Shoback
- John J. Wysolmerski

PROMOTED BY

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PROGRAMME

THURSDAY, MAY 11TH - AFTERNOON

OPENING CEREMONY

01.30 p.m.

Welcome addresses and Presentation of the
4th Parathyroid Medal of FIRMO Foundation
Maria Luisa Brandi (Florence, I)
Wenhan Chang (San Francisco CA, USA)
Enikő Kállay (Vienna, A)
Rajesh V. Thakker (Oxford, UK)

SESSION I – CALCIUM CASR SIGNALLING

Chairpersons:

Frank Bruggeman (Amsterdam, NL)
Ernesto Carafoli (Padua, I)

02.00 p.m.

Dolores Shoback (San Francisco CA, USA)
The CaSR discovery opens way to the future

02.30 p.m.

Arthur Conigrave (Sydney, AUS)
Biased signalling from CaSR

03.00 p.m.

Hans Bräuner-Osborne (Copenhagen, DK)
*Trans-activation and allosteric modulation
of the calcium-sensing receptor*

03.30 p.m.

Donald Ward (Manchester, UK)
*Cell-specific CaSR signalling: effector feedback modulation of
receptor responsiveness*

04.00 p.m.

Leonidas Tsiokas (Edmond OK, USA)
Regulation of CaSR by TRPC1 channels

04.30 p.m.

Coffee Break

SESSION II – PHARMACOLOGY OF THE CASR

Chairpersons:	Maria Luisa Brandi (<i>Florence, I</i>) Sandra Petraglia (<i>Roma, I</i>)
05.00 p.m.	Gerda E. Breitwieser (<i>Danville PA, USA</i>) <i>Pharmacofeatures</i>
05.30 p.m.	Edward F. Nemeth (<i>Toronto, CDN</i>) <i>Calcimimetic and Calcilytic Drugs</i>
06.00 p.m.	Letizia Vannucci (<i>Florence, I</i>) <i>Parathyroid cell lines: a model for in vitro drug testing</i>
06.30 p.m.	PLENARY LECTURE Rajesh V. Thakker (<i>Oxford, UK</i>) introduces: Allen M. Spiegel (<i>New York NY, USA</i>) <i>Calcium actions and its regulators: from basic research to clinical applications</i>
07.15 p.m.	Welcome cocktail

FRIDAY, MAY 12TH – MORNING

SESSION III – THE ROLE OF CASR IN THE PATHOGENESIS OF CALCITROPIC DISORDERS

Chairpersons:	Laura Masi (<i>Florence, I</i>) Dolores Shoback (<i>San Francisco CA, USA</i>)
08.30 a.m.	Rajesh V. Thakker (<i>Oxford, UK</i>) <i>CaSR signalling pathways and hypercalcemia in humans</i>
09.00 a.m.	Michael Mannstadt (<i>Boston MA, USA</i>) <i>CaSR and $G\alpha 11$ in hypoparathyroidism in humans</i>
09.30 a.m.	Giuseppe Vezzoli (<i>Milan, I</i>) <i>Kidney disorders</i>
10.00 a.m.	David Goltzman (<i>Montreal, CDN</i>) <i>Bone diseases</i>
10.30 a.m.	Coffee break

SESSION IV - ORAL COMMUNICATIONS AND HOT TOPICS

Chairpersons:	Luisella Cianferotti (Florence, I) Geoffrey N. Hendy (Montreal, CDN)
11.00 a.m.	Caroline M. Gorvin (Oxford, UK) <i>Studies of an autosomal dominant hypocalcemia Type-1 (Adh1) associated Calcium-sensing Receptor (CaSR) mutation, ARG680GLY, provides insights into biased signalling</i>
11.15 a.m.	Martin Schepelmann (Cardiff, UK) <i>Altered mineral ion metabolism in a mouse model of targeted CaSR deletion from vascular smooth muscle cells</i>
11.30 a.m.	Sarah Howles (Oxford, UK) <i>Mice with an inactivating ASP195GLY mutation in G-protein Subunit Alpha-11 (Gα11) are a model for familial hypocalciuric hypercalcaemia type 2 (FHH2)</i>
11.45 a.m.	Polina Yarova (Cardiff, UK) <i>Towards the repurposing existing clinical-grade calcilytics for allergic asthma</i>
12.00 p.m.	Nariman Balenga (Baltimore MD, USA) <i>Orphan adhesion GPCR GPR64 regulates CaSR function in parathyroid</i>
12.15 p.m.	Marianna Ranieri (Bari, Italy) <i>A Novel CaSR- dependent microRNA pathway is involved in the downregulation of AQP2 expression contributing to volume depletion in Pendrin/Na-Cl cotransporter dKO mice</i>
12.30 p.m.	Lunch and poster discussion

FRIDAY, MAY 12TH – AFTERNOON

SESSION V - PRECLINICAL MODELS

Chairpersons:	Arthur Conigrave (Sydney, AUS) Donald Ward (Manchester, UK)
02.00 p.m.	Qing R. Fan (New York NY, USA) <i>Crystal structure of CaSR</i>
02.30 p.m.	Wenhan Chang (San Francisco CA, USA) <i>CaSR/GABABR1 heteromers mediate PTH hypersecretion in hyperparathyroidism</i>
03.00 p.m.	Fadil M. Hannan (Liverpool, UK) <i>Mouse models for ADH1 and ADH2</i>
03.30 p.m.	Caroline Gorvin (Oxford, UK) <i>Stable cell lines expressing adaptor protein 2 mutations to investigate signalling pathways</i>
04.00 p.m.	Coffee break

SESSION VI - CALCITROPIC DISORDERS: NEWS IN MEDICAL TREATMENT

Chairpersons:	Rachel I. Gafni (Bethesda MD, USA) Andrea Lenzi (Rome, I)
04.30 p.m.	John P. Bilezikian (New York NY, USA) <i>Primary hyperparathyroidism</i>
05.00 p.m.	Masafumi Fukagawa (Isehara, J) <i>Secondary hyperparathyroidism</i>
05.30 p.m.	Maria Luisa Brandi (Florence, I) <i>Hypoparathyroidism</i>
06.00 p.m.	Michael T. Collins (Bethesda MD, USA) <i>Treatment for ADH1 in humans</i>

SESSION VII – NON CALCITROPIC DISORDERS: DIGESTIVE AND SKIN FUNCTION

Chairpersons:	Enikő Kállay (<i>Vienna, A</i>) Francesco Tonelli (<i>Florence, I</i>)
06.30 p.m.	Chia-Ling Tu (<i>San Francisco CA, USA</i>) <i>Role of CaSR in skin wound healing</i>
07.00 p.m.	James J. Pestka (<i>East Lansing MI, USA</i>) <i>Control of gastroenteric hormones by CaSR</i>
07.30 p.m.	Sam Cheng (<i>Gainesville FL, USA</i>) <i>The role of the CaSR in gastrointestinal inflammation</i>

SATURDAY MAY 13TH - MORNING

SESSION VIII – NON CALCITROPIC DISORDERS: BLOOD VESSELS AND LUNG

Chairpersons:	Dolores Shoback (<i>San Francisco CA, USA</i>) Elisabetta Cerbai (<i>Florence, I</i>)
08.00 a.m.	Harry Z.E. Greenberg (<i>London, UK</i>) <i>Nitric oxide signalling mediates CaSR-induced vasodilatations</i>
08.30 a.m.	Y.S. Prakash (<i>Rochester MN, USA</i>) <i>Calcium sensing receptor in perinatal airway disease</i>

SESSION IX – NON CALCITROPIC DISORDERS: CANCER

Chairpersons:	Wenhan Chang (<i>San Francisco CA, USA</i>) Romuald Mentaverri (<i>Amiens, F</i>)
09.00 a.m.	John J. Wysolmerski (<i>New Haven CT, USA</i>) <i>CaSR actions on PTHrP in breast cancer</i>
09.30 a.m.	Enikő Kállay (<i>Vienna, A</i>) <i>The role of the CaSR in colon cancer</i>
10.00 a.m.	Carmen de Torres (<i>Barcelona, E</i>) <i>The role of the CaSR in neuroblastoma</i>
10.30 a.m.	Coffee break

SESSION X – FUTURE DEVELOPMENTS FOR CASR TARGETED THERAPIES

Chairpersons:	Hans Bräuner-Osborne (<i>Copenhagen, DK</i>) Fadil M. Hannan (<i>Liverpool, UK</i>)
11.00 a.m.	Daniela Riccardi (<i>Cardiff, UK</i>) <i>Asthma</i>
11.30 p.m.	Seiji Fukumoto (<i>Tokushima, J</i>) <i>Glucose metabolism</i>
12.00 p.m.	Katie Leach (<i>Melbourne, AUS</i>) <i>Rational design of CaSR therapeutics for diverse disorders</i>
12.30 p.m.	Lunch and poster discussion
03.00 p.m.	CONCLUDING REMARKS Maria Luisa Brandi (<i>Florence, I</i>) Wenhan Chang (<i>San Francisco CA, USA</i>) Enikő Kállay (<i>Vienna, A</i>) Rajesh V. Thakker (<i>Oxford, UK</i>)



ASBMR YOUNG INVESTIGATOR AWARD WINNERS

- 1 Halah Albar
Signal crosstalk between CaSR and gs-coupled receptors
- 2 Sarah Brennan
Molecular requirements for temperature dependent changes in CaSR-induced Ca²⁺i oscillations
- 3 Annarita Di Mise
CaSR is functionally expressed in conditionally immortalized proximal tubular epithelial cells (ciPTEC) deficient for polycystin 1 or derived from ADPKD1 patients, representing a possible therapeutic target
- 4 Anna Gluck
Systematic in silico evaluation of rare genetic variants in G-Protein alpha 11
- 5 Caroline M. Gorvin **ASBMR Young investigator top scoring abstract**
Studies of an autosomal dominant hypocalcemia type-1 (adh1) associated calcium-sensing receptor (CaSR) mutation, ARG680GLY, provides insights into biased signalling
- 6 Sarah Howles
Mice with an inactivating ASP195GLY mutation in G-Protein subunit alpha-11 (Gα11) are a model for familial hypocalciuric hypercalcaemia type 2 (fhh2)
- 7 Mie Kronborg Olesen
Extracellular domain calcium-sensing receptor (CaSR) mutations leading to hypercalcemic and hypocalcemic disorders cluster at the homodimeric interface
- 8 Preeti Sharma
CaSR protein expression analysis in stem cells derived from human skeletal muscle and human adipose tissue
- 9 Martin Schepelmann
Altered mineral ion metabolism in a mouse model of targeted CaSR deletion from vascular smooth muscle cells

GENERAL INFORMATION

Meeting venue

The venue for the Meeting will be Palazzo Ximènes Panciatichi, Via Borgo Pinti, 68 - 50121 Florence (Italy)

Accommodation

It is possible to book a room at a special rate using the Florence Convention Bureau website (<http://www.florencecongressbooking.com/index/en.shtml>) indicating the code CASR2017.

Secretariat during the Meeting

The Secretariat will be open at the following times:
Thursday, May 11TH, from 10.30 a.m. to 07.45 p.m.
Friday, May 12TH, from 08.00 a.m. to 08.00 p.m.
Saturday, May 13TH, from 08.00 a.m. to 01.30 p.m.

Official language

The official language of the Meeting will be English.

Registration

The Meeting is free to attend.

Technical facilities speakers

Facilities will be available for computer presentations and overhead projections. A business center with PC (Powerpoint for Windows) will be available for check and preview of presentations. It is essential that speakers take their presentations to the business center at least one hour before the session starts.

The slide center will be open at the following times:

Thursday, May 11TH, from 10.30 a.m. to 07.45 p.m.

Friday, May 12TH, from 08.00 a.m. to 08.00 p.m.

Saturday, May 13TH, from 08.00 a.m. to 01.30 p.m.

Lunches and coffee breaks

Lunches and coffee breaks will be served in the Meeting area.

Abstracts book

Participants will receive the Abstract book at the Meeting.

European CME Credits

EACCME credits have been requested for May 11TH-12TH-13TH for the following disciplines: Internal Medicine, Metabolic and Diabetes Diseases, Rheumatology, Clinical Biochemistry, Endocrinology, Andrology and Reproduction Medicine.

EACCME credits



The '3rd International Symposium on: The Calcium-Sensing Receptor (CaSR)' was granted 12 European CME credits (ECMEC) by the European Accreditation Council for Continuing Medical Education (EACCME).

Event code: 15527

The '3rd International Symposium on: The Calcium-Sensing Receptor (CaSR)' is accredited by the European Accreditation Council for Continuing Medical Education (EACCME) to provide the following CME activity for medical specialists. The EACCME is an institution of the European Union of Medical Specialists (UEMS), www.uems.net.

The '3rd International Symposium on: The Calcium-Sensing Receptor (CaSR)' is designated for a maximum of 12 hours of European external CME credits. Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.

Through an agreement between the European Union of Medical Specialists and the American Medical Association, physicians may convert EACCME credits to an equivalent number of AMA PRA Category 1 Credits™. Information on the process to convert EACCME credit to AMA credit can be found at www.ama-assn.org/go/internationalcme.

Live educational activities, occurring outside of Canada, recognized by the UEMS-EACCME for ECMEC credits are deemed to be Accredited Group Learning Activities (Section 1) as defined by the Maintenance of Certification Program of The Royal College of Physicians and Surgeons of Canada.

EACCME credits

Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity. The EACCME credit system is based on 1 ECMEC per hour with a maximum of 3 ECMECs for half a day and 6 ECMECs for a full-day event.

LIST OF CHAIRPERSONS, SPEAKERS, CO-PRESIDENTS OF THE SYMPOSIUM

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