



UNIVERSITÀ DI PISA



THE GUT BARRIER:

a novel frontier
in digestive
and extra-digestive
diseases

July 4-5 2024

Polo delle Benedettine, Pisa, Italy

PRESIDENTS

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SCIENTIFIC COMMITTEE

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Scientific Background

The intestinal barrier, which primarily consists of a mucus layer, an epithelial barrier, and a gut vascular barrier, has a crucial role in health and disease by facilitating nutrient absorption and preventing the entry of pathogens. The gut barrier is in close contact with gut microbiota on its luminal side and with immune/inflammatory cells and enteric nervous system (ENS) cells on its tissue side. Increasing evidence suggests that the intestinal barrier is compromised in digestive (both organic and functional) and extra-digestive disorders, including inflammatory bowel diseases, irritable bowel syndrome, visceral hypersensitivity, obesity, neurological and neuropsychiatric disorders. A close interplay between basic and translational research is mandatory for a better understanding of the interactions of gut barrier with enteric bacteria and intestinal neuro-immune system in different clinical conditions. This approach is evident in the four sessions of the meeting, gathering main experts in this field. *“The Gut Barrier: a novel frontier in digestive and extra-digestive diseases”* event aims to provide a comprehensive overview on advances in the interplay among intestinal barrier, gut microbiota, immune system and ENS in health and disease, covering a combination of clinical and basic research aspects, and to discuss how the enteric barrier can impact clinical practice, with novel diagnostic and therapeutic strategies, today and in the coming future.

Topics

Aging • Alzheimer’s disease • Autism spectrum disorder • Cancer • Depression • Diabetes • Drugs • Enteric glia • Enteric nervous system • Gut inflammation • Gut microbiota • Gut-on chip • Inflammatory bowel diseases • Intestinal immune system • Intestinal organoids • Irritable bowel syndrome • Microbiota • Microbiota gut-brain axis • Mucosal barrier • Nutraceuticals • Obesity • Parkinson’s disease • Postbiotics • Prebiotics • Probiotics • Vascular barrier • Visceral pain

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Endoscopisti Digestivi
Ospedalieri



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DAY 1

- 13:00-13:30** Registration of participants
13:30-14:00 Introduction and Welcome Address
14:00-14:45 **Opening Lecture**

Chaired by Carmelo Scarpignato (Msida, Malta)
All disease begins in the (leaky) gut
Giovanni Barbara (Bologna, Italy)

SESSION 1

Gut barrier: its Role in Physiology and Pathology

Chairpersons: Vincenzo Calderone (Pisa, Italy) & Giuseppe Esposito (Rome, Italy)

- 14:45-15:15** Intestinal barrier as bridging plug between microbiota-gut-brain axis and brain disorders
Carolina Pellegrini (Pisa, Italy)
- 15:15-15:45** Gut barrier and enteric glia interplay in health and disease
Stefania Ceruti (Milan, Italy)
- 15:45-16:15** Assessing intestinal barrier integrity and permeability
Raffaella Barbaro (Bologna, Italy)
- 16:15-16:45** *Coffee break*

SESSION 2

Gut Barrier and Immune System

Chairpersons: Cecilia Giron (Padua, Italy) & Lorenzo Di Cesare Mannelli (Florence, Italy)

- 16:45-17:15** Intestinal organoids and gut-on chip: a new tool for characterizing the bacteria-immune interplay and test novel therapeutics
Laura Stronati (Rome, Italy)
- 17:15-17:45** Regulatory T cells are primed to aid tolerance of gut bacteria
Giuseppe Matarese (Naples, Italy)
- 17:45-18:15** Immune system and gut-brain axis: the case for autism
Elisabetta Volpe (Rome, Italy)
- 18:15-18:30** Concluding remarks day 1
- 20:00** *Dinner*

DAY 2

- 09:15-10:00** **Keynote lecture**
Chaired by Nunzia Bernardini (Pisa, Italy)
Gut mucosal-vascular barrier in health and disease
Maria Rescigno (Milan, Italy)

SESSION 1

Gut Barrier and Therapeutical Interventions

Chairpersons: Giuseppe Cirino (Naples, Italy) & Simone Guglielmetti (Milan, Italy)

- 10:00-10:30** Mechanisms underlying the effects of pre- and probiotics on gut barrier structure and function
Patrizia Brigidi (Bologna, Italy)
- 10:30-11:00** Postbiotics: an alternative and innovative therapeutical intervention for the chronic inflammatory diseases
Giuseppe Penna (Milan, Italy)
- 11:00-11:30** How to assess of gut microbiota in clinical practice
Gianluca Ianiro, (Roma, Italy)
- 11:30-12:00** *Coffee Break*

SESSION 2

Gut Barrier and Clinical Implications

Chairpersons: Rocchina Colucci (Padua, Italy) & Liberato Berrino (Naples, Italy)

- 12:00-12:30** Targeting gut barrier for the treatment of neurological diseases: focus on pre- and probiotics
Pascal Derkinderen (Nantes, France)
- 12:30-13:00** Targeting gut barrier for the treatment of intestinal diseases: focus on pre- and probiotics
Massimo Bellini (Pisa, Italy)
- 13:00-13:30** Drug effects on gut microbiota
Carmelo Scarpignato (Msida, Malta)
- 13:30-14:00** Concluding remarks
- 14:00-14:30** *Lunch*

Faculty

Giovanni Barbara, *Bologna (Italy)*

Maria Raffaella Barbaro, *Bologna (Italy)*

Massimo Bellini, *Pisa (Italy)*

Patrizia Brigidi, *Bologna (Italy)*

Stefania Maria Ceruti, *Milano (Italy)*

Pascal Derkinderen, *Nantes (France)*

Gianluca Ianiro, *Roma (Italy)*

Giuseppe Matarese, *Napoli (Italy)*

Carolina Pellegrini, *Pisa (Italy)*

Giuseppe Penna, *Milano (Italy)*

Maria Rescigno, *Milano (Italy)*

Carmelo Scarpignato, *Msida (Malta)*

Laura Stronati, *Roma (Italy)*

Elisabetta Volpe, *Roma (Italy)*

REGISTRATION

Registration to the Symposium can be performed on-line at the following link:
<https://webplatform.planning.it/gutbarrier/register>

REGISTRATION FEES

Regular	150,00 €
Members of SIAI, GISN, AIGO, SIF, FISMAD, SINGEM	100,00 €
Fellows	50,00 €
Students	Free of charge

LOCATION

Polo delle Benedettine

Piazza S. Paolo a Ripa D'Arno, 16
56125 Pisa

ORGANIZING LOCAL COMMITTEE

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 PLANNING

Planning Congressi SRL

Bologna, Italy