

Basic Science Course

Epithelial ion transport in the GI tract

July 12-15, 2012 University of Szeged and Hunguest Hotel Forrás, Szeged, Hungary



Course directors

Péter Hegyi (Szeged, Hungary) Peter LM Jansen (Amsterdam, The Netherlands) Matthias Löhr (Stockholm, Sweden) Michael Schemann (Munich, Germany)

Faculty

Seth Alper (Boston, USA)
Martin Diener (Giessen, Germany)
Mike Gray (Newcastle, UK)
Hiroshi Ishiguro (Nagoya, Japan)
Wouter de Jonge (Amsterdam, The Netherlands)
Stephen Keely (Dublin, Ireland)
Min Goo Lee (Seoul, Korea)
Marcus Mall (Heidelberg, Germany)
Shmuel Muallem (Bethesda, USA)
Ronald Oude Elferink (Amsterdam, The Netherlands)
Isabel Romero Calvo (Granada, Spain)
Ursula Seidler (Hannover, Germany)
Francisco V. Sepúlveda (Valdivia, Chile)
Manoocher Soleimani (Cincinnati, USA)
Viktória Venglovecz (Szeged, Hungary)



Hands-on-training managers

Tibor Wittmann (Szeged, Hungary) Zoltán Rakonczay (Szeged, Hungary)

Hands-on-training supervisors

Klaudia Farkas (Szeged, Hungary) Andrea Geisz (Szeged, Hungary) Linda Judák (Szeged, Hungary) József Maléth (Szeged, Hungary) Petra Pallagi (Szeged, Hungary)

Departments involved in the hands-on-training

First Department of Medicine, Faculty of Medicine Chair: Tibor Wittmann (Szeged, Hungary)

Department of Pharmacology and Pharmacotherapy Chair: András Varró (Szeged, Hungary)

Thursday, July 12, 2012

Arrival (Hotel Forrás)

12:00-16:00

Arrival and registration

16:00-16:30

Meet and greet

Welcome and keynote lecture (Hotel Forrás)

Chairs: László Vécsei, Tibor Wittmann, Péter Hegyi

16:30-16:40

Welcome by the University of Szeged

László Vécsei

Tibor Wittmann

16:40-17:00

Introduction of participants

Péter Hegyi

17:00-17:30

Epithelial ion transport in the GI tract

Péter Hegyi

State-of-the-art lectures: Ion transporters (Hotel Forrás)

Chairs: Shmuel Muallem, Mike Gray

17:30-18:00

Sodium-hydrogen transporters

Ursula Seidler

18:00-18:30

Chloride-bicarbonate transporters

Seth Alper

18:30-19:00

Sodium-bicarbonate transporters

Manoocher Soleimani

Dinner

19:30 / 20:00

Meet in the hotel lobby / dinner

Friday, July 13, 2012

State-of-the-art lectures: Ion channels (Hotel Forrás)

Chairs: Seth Alper, Viktória Venglovecz

08:30-09:00

Epithelial CI- channels in the GI tract and their role in anion and fluid secretion

Mike Gray

09:00-09:30

Epithelial sodium channels

Marcus Mall

09:30-10:00

Epithelial potassium channels

Francisco V. Sepúlveda

10:00-10:30 **Coffee break**

10:30-12:00

Abstract presentations (Hotel Forrás)

Chairs: Peter Jansen, Michael Schemann

12:00-13:30

Walk to and lunch break at the University of Szeged

13:30-16:00

Parallel sessions: Hands-on-training (University of Szeged)

- Topic 1: Isolation of epithelial cells from glands József Maléth & Min Goo Lee
- Topic 2: Isolation of epithelial cells from biopsy samples
 Tibor Wittman, Klaudia Farkas & Ursula Seidler
- Topic 3: Tissue culturing of epithelial cells
 Andrea Geisz & Michael Schemann
- Topic 4: Patch clamping of single epithelial cells Linda Judák & Mike Gray

Friday, July 13, 2012 (continued)

- Topic 5: Fluorescence measurement, microperfusion of pancreatic ducts
 Viktória Venglovecz & Shmuel Muallem
- Topic 6: Measurement of fluid secretion Petra Pallagi & Zoltán Rakonczay

16:00-17:00

Coffee break at the University of Szeged and walk to Hotel Forrás

State-of-the-art lectures: Epithelial functions (Hotel Forrás)

Chairs: Manoocher Soleimani, Ronald Oude Elferink

17:00-17:30

Neural control of epithelial functions

Michael Schemann

17:30-18:00

Hepatic and intestinal organic anion transport

Peter LM Jansen

18:00-18:30 Isolated pancreatic duct epithelial cells

Matthias Löhr

Social programme

21:00

Folkdance event at open air theatre

Saturday, July 14, 2012

State-of-the-art lectures: Pancreas (Hotel Forrás)

Chairs: Zoltán Rakonczay, Min Goo Lee

08:30-09:00

Model for bicarbonate secretion

Hiroshi Ishiguro

09:00-09:30

Unconventional trafficking of CFTR

Min Goo Lee

09:30-10:00

Coordination of bicarbonate secretion

Shmuel Muallem

10:00-10:30

Pathophysiology of bicarbonate secretion

Viktória Venglovecz

10:30-11:00 Coffee break

11:00-12:30

Abstract presentations (Hotel Forrás)

Chairs: Michael Schemann, Matthias Löhr

12:30-14:00

Walk to and lunch break at the University of Szeged

14:00-16:30

Parallel sessions: Hands-on-training (University of Szeged)

Parallel session topics 1-6

16:30-17:30

Coffee break at the University of Szeged and walk to Hotel Forrás

Saturday, July 14, 2012 (continued)

State-of-the-art lectures: Intestinal ion transport (Hotel Forrás)

Chairs: Ursula Seidler, Stephen Keely

17:30-18:00

Ion transport across colonic epithelium

Martin Diener

18:00-18:30

Impaired water and ion movements in inflammatory

bowel diseases

Isabel Romero Calvo

18:30-19:00

Regulatory mechanisms of barrier function in GI diseaseWouter de Jonge

Dinner

20:00

Gala dinner at ghe University of Szeged

Sunday, July 15, 2012

State-of-the-art lectures: Liver and bile (Hotel Forrás)

Chairs: Peter Jansen, Wouter de Jonge

08:30-09:00

Bile acid transport and signaling in the terminal ileum Peter LM Jansen

09:00-09:30

Bile acids in the regulation of intestinal epithelial fluid and electrolyte secretion

Stephen Keely

09:30-10:00

ABC transporters in liver and intestine.

Lessons from knock-out mice

Ronald Oude Elferink

10:00-10:15 **Coffee break**

10:15-11:15

Abstract presentations (Hotel Forrás)

Chairs: Péter Hegyi, Michael Schemann

11:15-12:00

Coffee break at Hotel Forrás and walk to the University of Szeged

12:00-14:30

Parallel sessions: Hands-on-training (University of Szeged)

Parallel session topics 1-6

14:30-15:30

Lunch break and farewell

15:30

Shuttle to Budapest Airport

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House of European Gastroenterology Wickenburggasse 1 A-1080 Vienna. Austria

T +43 (0) 1 997 16 39 F +43 (0) 1 997 16 39 10

office@ueg.eu www.ueg.eu

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