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)

Thanks to the University of Szeged for the support.
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)

For more information visit www.ueg.eu/education
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 Cl- 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

Continued >
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
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 disease
Wouter de Jonge

Dinner
20:00
Gala dinner at the 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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