

EFOP-3.6.2-16-2017-00006

Translational interactive hands-on training and conference on epithelial ion transport

including two symposia

“Antibacterial and mucolytic therapy in cystic
fibrosis”

and

“Research in oral cavity – from basic science to
clinical use”

PROGRAM

SZÉCHENYI 2020



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BEFEKTETÉS A JÖVŐBE

Date:

November 22-23, 2018

Conference venues:

Section 1

Béla Johan Lecture Hall
Floor 21

Section 2

József Knoll Room
Floor 4, Department of Pharmacology

in the

Theoretical Building of the Semmelweis University
Nagyvárad tér 4, Budapest, H-1089

Organizers:

Gábor Varga, Semmelweis University
Beáta Kerémi, Semmelweis University
Ákos Zsembery, Semmelweis University
Zoltán Rakonczay jr., University of Szeged

Conference dinner:

Date:

20:30 on Thursday, November 22, 2018

Location:

Trófea Grill Restaurant

Address:

Király utca 30-32, Budapest, H-1061

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BEFEKTETÉS A JÖVŐBE

Detailed program

SECTION 1, DAY 1
Béla Johan Lecture Hall
Floor 21

Thursday

November 22, 2018

08:30–18:00 **REGISTRATION**
 Registration Desk

09:30-11:20 **HANDS-ON TRAINING – SESSION 1**

Each participant may select and attend up to two courses from Courses 1-6. The limit is 10 attendants per course, except where otherwise indicated.

Course 1 **Computational ion transport process modelling**
TBA

Martin Steward, Biological Sciences School of Biological Sciences,
 University of Manchester, United Kingdom

Course 2 **Special model for testing bacterial growth**
Microbiology
Floor 13

Orsolya Dobay, Institute of Medical Microbiology, Faculty of Medicine,
 Semmelweis University

Course 3 **Intracellular calcium microfluorometric imaging**
Oral Biology
Floor 15

Kristóf Kádár, Department of Oral Biology, Faculty of Dentistry,
 Semmelweis University

Course 4 **Patch clamping to assess ion channels**
Pharmacology
Floor 5

László Köles, Institute of Pharmacology and Pharmacotherapy, Faculty of
 Medicine, Semmelweis University

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Course 5
Oral Biology
Floor 15

Intracellular pH microfluorometric imaging

Róbert Rácz, Department of Oral Biology, Faculty of Dentistry, Semmelweis University

Course 6
Oral Biology
Floor 15

Preclinical modeling of bone implant surface integration

Sándor Farkasdi, Department of Oral Biology, Faculty of Dentistry, Semmelweis University

11:30-13:20

HANDS-ON TRAINING – SESSION 2

Each participant may select and attend up to two courses from Courses 1-6. The limit is 10 attendants per course, except where otherwise indicated.

13:20-14:00
Floor 18

LUNCH BREAK

14:00-17:00
Béla Johan Room
Floor 21

SESSION 1
SYMPOSIUM
Antibacterial and mucolytic therapy in cystic fibrosis
Organizer: Ákos Zsembery

Chair: *Ákos Zsembery*, Budapest

14:00-14:10

Bicarbonate in cystic fibrosis – facts, perspectives and hopes

Ákos Zsembery, Department of Oral Biology, Faculty of Dentistry, Semmelweis University

14:10-14:30

Cystic fibrosis – sixty-five roses

Adrien Halász, National Korányi Institute for Pulmonology

14:30-14:50

Does bicarbonate influence bacterial growth in WinCF model?

Pongsiri Jaikumpun, Department of Oral Biology, Faculty of Dentistry, Semmelweis University

14:50-15:10

Future pulmonary therapy in cystic fibrosis: does bicarbonat have mucolytic effects? Can innovative formulation of antibiotics be a solution?

Rita Ambrus, Department of Pharmaceutical Technology and Regulatory Affairs, University of Szeged

15:10-15:30

Rheological properties of mucin – its pathophysiological role in cystic fibrosis

Edit Benke, Department of Pharmaceutical Technology and Regulatory Affairs, University of Szeged

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15:30-15:50
Floor 18 **COFFEE BREAK**

15:50-16:10 **Is bicarbonate toxic or beneficial on airway epithelium?**
Alexandra Bocsik, Biological Research Centre, Szeged

16:10-16:30 **Targeting c-di-GMP level in *P. Aeruginosa*: bicarbonate might combat biofilm formation in cystic fibrosis**
Kasidid Ruksakiet, Department of Oral Biology, Faculty of Dentistry, Semmelweis University

16:30-16:50 **Inhalation of sodium bicarbonate – an animal study**
Kata Csekő, Department of Pharmacology and Pharmacotherapy, University of Pécs

16:50-17:00 **Concluding remarks**
Ákos Zsembery, Department of Oral Biology, Faculty of Dentistry, Semmelweis University

17:10-17:40
Béla Johan Hall
Floor 21 **PLENARY SESSION 1**

Chair: *Zoltán Zádori*, Budapest

17:10-17:40 **Stable gastric pentadecapeptide BPC 157: healing in gastrointestinal tract. Special reference to vascular effect and muscle, tendon and bone healing**
Predrag Sikirić, Department of Pharmacology, School of Medicine, University of Zagreb, Croatia

SECTION 1, DAY 2
Béla Johan Lecture Hall
Floor 21

Friday

November 23, 2018

08:00–18:30 **REGISTRATION**
 Registration Desk

08:30-09:30 **PLENARY SESSION 2**
Béla Johan Room
Floor 21

Chair: *Gábor Varga*, Budapest

08:30-09:00 **Computational modelling of epithelial ion transport - is it worth the effort?**

Martin Steward, Biological Sciences School of Biological Sciences, University of Manchester, United Kingdom

09:00-09:30 **BMP and biomimetic calcium phosphate-based biomaterials for bone regeneration**

Gang Wu, Department of Oral Implantology and Prosthetic Dentistry, Academic Centre for Dentistry, Amsterdam VU University and University of Amsterdam

09:30-13:05 **SESSION 2**
Béla Johan Room
Floor 21

Chairs: *Martin Steward*, Manchester
Zoltán Rakonczay, Szeged

09:30-09:55 **Endothelium derived factors in the cardiovascular disease: angiotensin converting enzymes**

Attila Tóth, Division of Clinical Physiology, Faculty of Medicine, University of Debrecen

09:55-10:10 **PMCA pump dysfunction leads to Ca²⁺ overload and pancreatic ductal epithelial cell death in cystic fibrosis**

Tamara Madácsy, First Department of Medicine, Faculty of Medicine, University of Szeged

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- 10:10-10:25 **The role of CFTR Cl⁻ channel in the cystic fibrosis-related diabetes**
Attila Ébert, Department of Pharmacology and Pharmacotherapy, Faculty of Medicine, University of Szeged
- 10:25-10:40 **Investigation of CFTR and SLC26A6 transporters in the course of acute pancreatitis**
Gabriella Fűr, Department of Pathophysiology, Faculty of Medicine, University of Szeged
- 10:40-10:55 **CFTR correctors restore the alcohol-induced CFTR expression defect in pancreatic ductal cells VX-770 and VX-809 restore the expression defect of cystic fibrosis transmembrane conductance regulator caused by alcohol**
Anna Grassalkovich, Department of Pharmacology and Pharmacotherapy and First Department of Medicine, Faculty of Medicine, University of Szeged
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|---------------------------------------|---------------------|
| 10:55-11:15
Floor 18 | COFFEE BREAK |
|---------------------------------------|---------------------|
- 11:15-11:40 **Foldamer and continuous-flow chemistry results towards the development of artificial chloride ion transporters**
István Mándity
Department of Organic Chemistry, Faculty of Pharmacy, Semmelweis University and
MTA TTK Lendület Artificial Transporter Research Group, Institute of Materials and Environmental Chemistry, Research Center for Natural Sciences, Hungarian Academy of Sciences
- 11:40-12:05 **Novel technologies in basic and translational pancreatic research**
József Maléth, First Department of Medicine, Faculty of Medicine, University of Szeged
- 12:05-12:20 **Human pancreatic ductal organoids as a new model in pancreas physiology**
Margit Németh, First Department of Medicine, Faculty of Medicine, University of Szeged
- 12:20-12:35 **Mechanosensitive ion channels in the development of ileus**
Karen Uray, Department of Medical Chemistry, Faculty of Medicine, University of Debrecen
- 12:35-12:50 **Functional characterization of TRPM7 channel on HAT-7 ameloblast cells**
Kristóf Kádár, Department of Oral Biology, Faculty of Dentistry, Semmelweis University

12:50-13:05 **Characterization of the function of transient receptor potential melastatin 2 in mouse pancreatic acinar cells**
Júlia Fanczal, First Department of Medicine, Faculty of Medicine, University of Szeged and Momentum Epithel Cell Signaling and Secretion Research Group, Hungarian Academy of Sciences-University of Szeged

13:05-13:45
Floor 18
LUNCH BREAK

13:45-15:35
Béla Johan Room
Floor 21
SESSION 3

Chairs: *Attila Tóth*, Debrecen
József Maléth, Szeged

13:45-14:10 **Molecular physiology of ion transport in the pancreas**
Zoltán Rakonczay, Department of Pathophysiology, Faculty of Medicine, University of Szeged

14:10-14:35 **Ion transport mechanisms of esophageal epithelial cells**
Viktória Venglovecz, Department of Pharmacology and Pharmacotherapy, Faculty of Medicine, University of Szeged

14:35-14:50 **Feszültség-függő ioncsatornák tanulmányozása placenta eredetű (chorionális) MSC-kben elektrofiziológiai technikával**
Szántó G. Tibor, Debreceni Egyetem, Általános Orvostudományi Kar, Biofizikai és Sejtbiológiai Intézet

14:50-15:05 **Fentanyl exacerbates the severity of L-ornithine-induced experimental acute pancreatitis in rats**
Emese Réka Bálint, Department of Pathophysiology, Faculty of Medicine, University of Szeged

15:05-15:20 **N-metil-4-izoleucin cyclosporin (NIM811) reduces the severity of acute pancreatitis**
Emese Tóth, First Department of Medicine, Faculty of Medicine, University of Szeged and Momentum Translational Gastroenterology Research Group, Hungarian Academy of Sciences-University of Szeged

15:20-15:35 **Dimethyl trisulfide: a promising drug candidate in experimental acute pancreatitis**
Lóránd Kiss, Department of Pathophysiology, Faculty of Medicine, University of Szeged

15:35-15:55
Floor 18
COFFEE BREAK

15:55-17:50
Béla Johan Room
Floor 21

SESSION 4

Chairs:

Viktória Venglovecz, Szeged
Ákos Zsembery, Budapest

15:55-16:20

Filling the gaps: new genetic association studies in chronic pancreatitis

Eszter Hegyi, Institute for Translational Medicine, Medical School, University of Pécs

16:20-16:35

Alcohol and smoking influence the iontransporter mechanisms of guinea pig esophageal epithelial cells, CP-D dysplastic Barrett's cell line and OE-33 adenocarcinoma cell line

Eszter Becskeházi, Department of Pharmacology and Pharmacotherapy, Faculty of Medicine, University of Szeged

16:35-16:50

Investigation of HCO₃⁻ secretion on the mouse pancreatic ductal organoid culture

Réka Molnár, First Department of Medicine, Faculty of Medicine, University of Szeged and Momentum Epithel Cell Signaling and Secretion Research Group, Hungarian Academy of Sciences-University of Szeged

16:50-17:05

Functional studies on electrolyte transport of ameloblasts and the effect of fluoride on tight junction formation in the HAT-7 ameloblast model

Róbert Rácz, Department of Oral Biology, Faculty of Dentistry, Semmelweis University

17:05-17:20

Smoothelin-like 1 protein promotes insulin sensitivity through the insulin signaling pathway

Beáta Lontay, Department of Medical Chemistry, Faculty of Medicine, University of Debrecen

17:20-17:35

Bile acids increase MUC4 expression in pancreatic ductal adenocarcinoma

Eleonóra Gál, First Department of Medicine, Faculty of Medicine, University of Szeged

17:35-17:50

Intracellular pathways of α 1 adrenergic stimulation-evoked fluid secretion in isolated lacrimal gland ducts in mice

Dóra Szarka, Department of Ophthalmology, Faculty of Medicine, University of Szeged

17:50-17:55
Béla Johan Room
Floor 21

CLOSING OF THE CONFERENCE

Gábor Varga, Semmelweis University, Budapest, Hungary

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BEFEKTETÉS A JÖVŐBE

SECTION 2

**Research in oral cavity –
from basic science to clinical use**

**Szájüregi kutatások –
az alaptudománytól a klinikai alkalmazásig**

Organizers:

Beáta Kerémi, Semmelweis University
Krisztina Buzás, University of Szeged
Csaba Hegedűs, University of Debrecen
Ákos Nagy, University of Pécs
Gábor Varga, Semmelweis University

Symposium venue:

**József Knoll Room
Floor 4, Department of Pharmacology**

Detailed program

SECTION 2, DAY 1

**József Knoll Room
Floor 4**

Thursday

November 22, 2018

10:00–18:00 REGISTRATION
Registration Desk

10:40-10:45 SYMPOSIUM OPENING
József Knoll Room
Floor 4

Gábor Varga, Semmelweis University, Budapest, Hungary

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BEFEKTETÉS A JÖVŐBE

10:45-12:45
József Knoll Room
Floor 4

SESSION 1

- Chairs: *Gábor Gerber*, Budapest
- 10:45-11:00 **Reliability of laser speckle contrast imaging to assess human gingival microcirculation**
Eszter Molnár, Department of Conservative Dentistry, Faculty of Dentistry, Semmelweis University
- 11:00-11:15 **The role of Optical Coherence Tomography (OCT) in the examination and diagnosis of oral soft and hard tissues**
Enikő Tóth, Department of Restorative Dentistry, Faculty of Dentistry, University of Debrecen
- 11:15-11:30 **Fogászati lakkok orális egészségre gyakorolt hatásának vizsgálata**
Lipták Lídia, Szegedi Tudományegyetem, Fogorvostudományi Kar, Fogszabályozási és Gyermekfogászati Tanszék
- 11:30-11:45 **Evaluating the antibacterial effect of silver layering on Ti surface**
István Lampé, Faculty of Dentistry, University of Debrecen
- 11:45-12:00 **Fiatal szájüregi daganatos betegek vizsgálata**
Csurgay Katalin, Semmelweis Egyetem, Fogorvostudományi Kar, Arc-, Állcsont-, Szájsebészeti és Fogászati Klinika
- 12:00-12:15 **Belső sínezési lehetőségek a biomimetikus restauratív kezelések során**
Sáry Tekla, Szegedi Tudományegyetem, Fogorvostudományi Kar, Konzerváló és Esztétikai Fogászati Tanszék
- 12:15-12:30 **Green LED as an effective light source for curing acrylate-based dental resins in combination with Irgacure 784**
Katalin Bukovinszky, Department of Biomaterials and Prosthetic Dentistry, Faculty of Dentistry, University of Debrecen
- 12:30-12:45 **Szájüregi daganatos betegek etiológiai-epidemiológiai vizsgálata: a szájüregi daganatok kialakulásának és megelőzésének népegészségügyi vonatkozásai**
Komlós György, Semmelweis Egyetem, Fogorvostudományi Kar, Arc-, Állcsont-, Szájsebészeti és Fogászati Klinika

12:45-13:30
Floor 18

LUNCH BREAK

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BEFEKTETÉS A JÖVŐBE

13:30-15:15 **SESSION 2**
József Knoll Room
Floor 4

- Chair: *Krisztina Buzás, Szeged*
 Csaba Dobó Nagy, Budapest
- 13:30-13:45 **Dental aspects of multiple myeloma**
 Enikő Gebri, Dental Outpatient Department, Faculty of Dentistry, University of Debrecen
- 13:45-14:00 **Titán felszínnel kölcsönható KRSR peptid molekuladinamikai vizsgálata**
 Tarjányi Tamás, Szegedi Tudományegyetem, Fogorvostudományi Kar, Orálbiológiai és Kísérletes Fogorvostudományi Tanszék
- 14:00-14:15 **An alternative bioactive ceramic: β -Tricalcium phosphate-silica aerogel for the potential use in dentistry**
 Viktória Hegedűs, Faculty of Dentistry, University of Debrecen
- 14:15-14:30 **Szisztémás betegségek és a parodontitisz kapcsolata a dohányzás tükrében**
 Battancs Emese, Szegedi Tudományegyetem, Fogorvostudományi Kar, Konzerváló és Esztétikai Fogászati Tanszék
- 14:30-14:45 **Hipofízis adenilát cikláz aktiváló polipeptid (PACAP) hatása a fogfejlődésre**
 Sándor Balázs, Pécsi Tudományegyetem Klinikai Központ, Fogászati és Szájsebészeti Klinika
- 14:45-15:00 **Az orális mikrobiom változása szájüregi daganatmegelőző elváltozásban szenvedő betegek biopsziás mintáiban**
 Decsi Gábor, Szegedi Tudományegyetem, Fogorvostudományi Kar, Szájsebészeti Tanszék
- 15:00-15:15 **A fogágybetegség, mint az atherosclerotikus-cardiovascularis betegség rizikófaktora**
 Georghita Dorottya, Szegedi Tudományegyetem, Fogorvostudományi Kar, Konzerváló és Esztétikai Fogászati Tanszék

15:15-15:30 **COFFEE BREAK**
Floor 18

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BEFEKTETÉS A JÖVŐBE

15:30-17:00 **SESSION 3**
József Knoll Room
Floor 4

Chairs: *Beáta Kerémi*, Budapest

15:30-15:45 **Performance of sand-blasted versus machined dental implants: meta-analysis**

László Márk Czumbel, Department of Oral Biology, Faculty of Dentistry, Semmelweis University

15:45-16:00 **Association of Epstein-Barr virus and human herpesvirus 6 with apical periodontitis**

Katinka Hernádi, Department of Periodontology, Faculty of Dentistry, University of Debrecen

16:00-16:15 **Combined drug delivery from light cured nanocomposite hydrogels**

József Bakó, Department of Biomaterials and Prosthetic Dentistry, Faculty of Dentistry, University of Debrecen

16:15-16:30 **Assessment of dentofacial characteristics in Middle Eastern (Syrian) young orthodontic patients with angle class II division 1 malocclusion**

Al Ayoubi Alaa, Department of Orthodontics and Pediatric Dentistry, Faculty of Dentistry, University of Szeged

16:30-16:45 **Investigation of the spreading vasodilatation on human gingiva**

Bernadett Gánti, Department of Conservative Dentistry, Faculty of Dentistry, Semmelweis University

16:45-17:00 **γ -Aminobutyric acid and derivatives reduce the incidence of acute pain after herpes zoster– a systematic review and meta-analysis**

Wuttapon Sadaeng, Department of Oral Biology, Faculty of Dentistry, Semmelweis University

17:10-17:40 **PLENARY SESSION 1**
Béla Johan Hall
Floor 21

Chair: *Zoltán Zádori*, Budapest

17:10-17:40 **Stable gastric pentadecapeptide BPC 157: healing in gastrointestinal tract. Special reference to vascular effect and muscle, tendon and bone healing**

Predrag Sikirić, Department of Pharmacology, School of Medicine, University of Zagreb, Croatia

SECTION 2, DAY 2
József Knoll Room
Floor 4

Friday**November 23, 2018**

08:00–14:00 **REGISTRATION**
 Registration Desk

08:30-09:30 **PLENARY SESSION 2**
 Béla Johan Hall
 Floor 21

Chair: *Gábor Varga*, Budapest

08:30-09:00 **Computational modelling of epithelial ion transport - is it worth the effort?**
Martin Steward, Biological Sciences School of Biological Sciences, University of Manchester, United Kingdom

09:00-09:30 **BMP and biomimetic calcium phosphate-based biomaterials for bone regeneration**
Gang Wu, Department of Oral Implantology and Prosthetic Dentistry, Academic Centre for Dentistry, Amsterdam VU University and University of Amsterdam

09:30-09:45 **COFFEE BREAK**
 Floor 18

09:45-11:30 **SESSION 4**
 József Knoll Room
 Floor 4

Chair: *Zsolt Lohinai*, Budapest
Gang Wu, Amsterdam

09:45-10:00 **Independent quantitative preclinical screening model for implant osseointegration using rat tail vertebra**
Sándor Farkasdi, Department of Oral Biology, Faculty of Dentistry, Semmelweis University

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- 10:00-10:15 **A comparative study of oral hygiene in psychiatric diseases (schizophrenia and Alzheimer's disease)**
Reza Aghasizadeh Sherbaf, Department of Oral Surgery, Faculty of Dentistry, University of Szeged
- 10:15-10:30 **Oral and maxillofacial abnormalities in Hyper IgE Syndrome**
Márta Szegedi, Faculty of Dentistry, University of Debrecen
- 10:30-10:45 **Kinetics of xenogeneic collagen matrix vascularization in human gingiva**
Réka Fazekas, Department of Conservative Dentistry, Faculty of Dentistry, Semmelweis University
- 10:45-11:00 **Post-occlusive blood flow measurement of the oral gingiva surrounding natural teeth and dental implants**
Barbara Mikecs, Department of Conservative Dentistry, Faculty of Dentistry, Semmelweis University
- 11:00-11:15 **Lobular fibrosis in labial salivary glands of patients with systemic autoimmune diseases**
Krisztián Katona, Department of Pathology, Oral Pathology Unit, Medical School and Clinical Center, Pécs University
- 11:15-11:30 **Biocompatibility of poly(aspartamid) based nanofibrous drug conjugates for periodontal ligament stem cells**
Tóth Krisztina, Department of Oral Biology, Faculty of Dentistry, Semmelweis University

11:30-11:45 **COFFEE BREAK**
Floor 18

11:45-13:45 **SESSION 5**
József Knoll Room
Floor 4

Chair: *Ákos Nagy*, Pécs

- 11:45-12:00 **Gas and redissolved phases of endodontic irrigants**
Mikaela Aresti, Department of Conservative Dentistry, Faculty of Dentistry, Semmelweis University
- 12:00-12:15 **Do dental erosion and salivary parameters differ between non-erosive and erosive esophageal reflux disease?**
Ildikó Berze, Department of Prosthodontics, Faculty of Dentistry, Semmelweis University
- 12:15-12:30 **Effect of orally administered probiotics on Porphyromonas gingivalis in oral cavity: a meta-analysis**
Thanyaporn Sang-ngoen, Department of Oral Biology, Faculty of Dentistry, Semmelweis University

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- 12:30-12:45 **Primer oszteoblaszt sejtek vizsgálata periimplantitisz terápiájában használt fertőtlenítő szerekkel kezelt titán felszínen**
Masa Roland, Szegedi Tudományegyetem, Fogorvostudományi Kar, Orálbiológiai és Kísérletes Fogorvostudományi Tanszék
- 12:45-13:00 **A nucleus pedunculopontinus kolinerg neuronjainak karakterizálása**
Baksa Brigitta, Debreceni Egyetem, Általános Orvostudományi Kar, Élettani Intézet
- 13:00-13:15 **Mikro RNS-ek szerepe szájüregi laphámrákok liquid biopsziás mintáiban**
Kövér Zsanett, Pécsi Tudományegyetem Klinikai Központ, Fogászati és Szájsebészeti Klinika
- 13:15-13:30 **Az intraoralis scannelési technika szerepe a 3D modellalkotásban egy új mérési metodika alapján**
Nagy Zsolt, Semmelweis Egyetem, Fogorvostudományi Kar, Konzerváló Fogászati Klinika
- 13:30-13:45 **Orvosi rehabilitációs kezelésben részesülő betegek orális egészségi állapotának vizsgálata**
Orsós Mercédesz, Semmelweis Egyetem, Fogorvostudományi Kar, Fogászati és Szájsebészeti Oktató Intézet

13:45-13:50 CLOSING OF THE SYMPOSIUM
József Knoll Room
Floor 4

Gábor Varga, Semmelweis University, Budapest, Hungary

13:50-14:30 LUNCH
Floor 18

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