



# 2022 2023

**STUDENTS &** PROJECTS

LEARNING BY DOING

### **EDITING CONTRIBUTORS**

Viktória Kocsis chief editor

Ágnes Tichyné Csontos Attila Márta Dóra Turcsiné Czapári Nóra Kerekes Rita Nagy Szilárd Váncsa *editors* 

Péter Hegyi Gábor Varga *lectors* 

Lili Fekete language editor

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### **SALUTATORY** A FEW WORDS FROM OUR LEADERSHIP

On June 1st, 2021 the Central of Translational Medicine (CMT) begun its work as a part of a new dynamic process at Semmelweis University (SU), aiming to reinforce the opportunities at multiple levels including teaching, research and patient care.

Nowadays, with the science rapidly evolving experimentation, data collection, analysis and decision-making based on scientific results have become essential to high-quality patient care. As a result, a new concept called Translational Medicine, has emerged with the main objective of accelerating and streamlining the use of scientific results, including the prevention, treatment and monitoring of diseases.

According to data from the European Commission's Statistical Office, 126 900 deaths occurred in Hungary in 2016, of which approximately 30 000 could have been avoided through better prevention, 16 000 through more effective patient care and a further 14 000 through better patient education. For patients under the age of 75 the situation is even more dramatic: four out of five deaths are found to be preventable. Apart from the COVID crisis, the statistics are slowly getting better, although with the effective use of knowledge to enhance our healthcare these statistics could be further improved.

As part of the Research, Development and Innovation (RDI) support system at SU, the Centre for Translational Medicine has a clear purpose to develop a harmony between teaching, research and medical services, as well as to reinforce the complexity of these three duties in a challenging environment. In order to achieve its goal to boost Hungary's competitiveness in all fields off medicine the Translational Medicine Program, is combining education and scientific activity which then is translated into patient care. Furthermore, this model is aiming to provide a suitable career model for outstanding doctors and professionals, thereby improving the quality of education, patient care and scientific performance.

The new Translational Medicine (TM) Program is open to all students from different departments and aspires to maintain close collaboration in the education of doctors, healthcare professionals and researchers.



BÉLA MERKELY Rector of the Semmelweis University



PÉTER FERDINANDY Vice-Rector for Science and Innovations



**PÉTER HEGYI** Director of the Central for Translational Medicine

# INTRODUCTION



### **THE HISTORY** OF TRANSLATIONAL MEDICINE IN HUNGARY

The first CTM in Hungary was established at University of Pécs (UP) in January, 2016 under the leadership of Péter Hegyi. The main partner for UP was the Translational Medicine Foundation (TMF), who provided educational materials, IT support, network connections and an internationally accessible, highly visible platform from the very beginning.

University of Pécs has established excellent conditions for medical care and its motivated professors, students and physicians, has provided great resources for patient care, education and research. The TMF has promoted practical application of scientific results and innovations in health care, as well as stimulating and unifying the exchange of information and data flow between universities, hospitals and research centres. By supporting patient care, education, scientific activity and communication, we set up an multifaceted unit at the outset, involving a number of different disciplines, including patient coordination, biostatistics, IT, data management, artificial intelligence, legal support and communication.

Within a short period of time, two hospitals (Szent György University Teaching Hospital of Fejér County in Székesfehérvár and Heim Pál National Pediatric Institute in Budapest) and three universities (University of Pécs in Pécs, University of Szeged in Szeged and Semmelweis University in Budapest) joined the TM program, expanding translational medicine in Hungary to a national level.

Within the first five years, almost 50 PhD students and residents have participated in our programs, and more than 300 high-quality research papers and articles have been published based on scientific research and translational patient care. The results have made it possible to develop and supplement a number of treatment guidelines and to immediately apply scientific results in patient care.

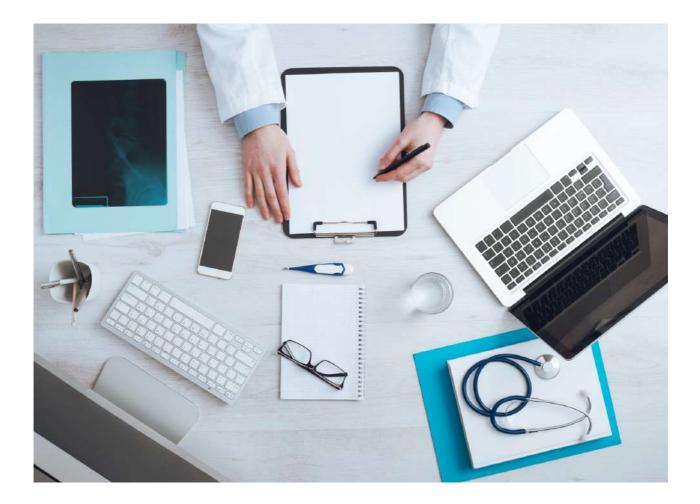
A summary of this period was published in the highly distinguished journal, Nature Medicine. In June, 2021 Semmelweis University established one of the largest TM centres in Europe, where in 2021 91, whereas, in 2022 83 PhD students began their research. This worldwide unique program is attracting considerable amount of attention internationally, allowing to estimate a significant growth in the program's future.



**PÉTER HEGYI** Director of the Centre for Translational Medicine

### **THE IMPORTANCE** OF TRANSLATIONAL MEDICINE

The major goal of TM is to turn scientific results into community benefits. Why is this necessary? The answer is quite simple: we are currently using scientific findings in everyday medicine with very poor efficiency. The European Statistical Office of the European Commission has recently reported that 1.7 million people under the age of 75 died in Europe in 2016, with around 1.2 million of those deaths could have been avoided through effective primary prevention and public health intervention. Therefore, Academia Europaea, one of the five Pan-European networks that form SAPEA (Science Advice for Policy by European Academies), a key element of the European Commission's Scientific Advice Mechanism (SAM), has launched a project in 2018 to develop a model to facilitate and accelerate the utilization of scientific knowledge for public and community benefit. During the process, leaders in the field, including prominent basic and clinical researchers, editors-in-chief of high-impact journals publishing translational research articles, TM centre leaders, media representatives, academics, and university leaders, developed the TM cycle, a new model that we believe could significantly improve the development of TM. This model focuses equally on the acquisition of new scientific results in healthcare, understandable and digestible summation of results, and their communication to all participants. The authors, including senior officers of Academia Europaea, conducted an important paper to serve as a basis for revising the thinking of TM with end result of enabling more efficient and cost-effective healthcare.

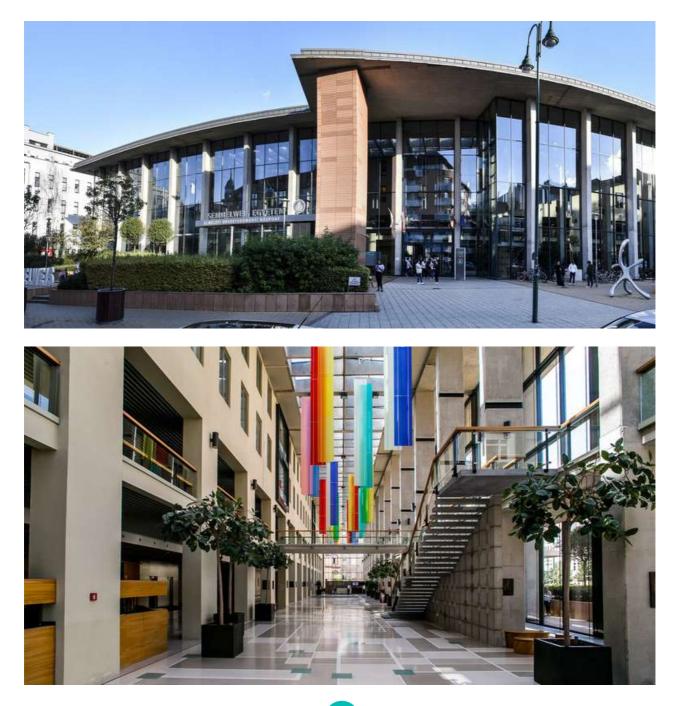




### **SEMMELWEIS UNIVERSITY (SU)** INTRODUCTION

Semmelweis University's history started more than 250 years ago in 1769. Today SU is one of the leading institutions of higher education in Hungary and the Central European Region in the field of medicine and health sciences. At SU, our core commitment is based on the integrity of education, research and medicine that makes the University an internationally recognised centre of excellence.

Semmelweis University aims to rank among the best universities in the world and recognized the importance and the high potential in the translational medicine. Therefore, this programme was invited to function in a much bigger scale than before, now under the umbrella of SU. As a result, the training at SU started with more than 90 students in 2021.



### **TRANSLATIONAL MEDICINE FOUNDATION (TMF)** INTRODUCTION

Translational Medicine is by default the translation of basic and clinical research findings, and more broadly the transitioning of all types of research - basic research, meta-analysis, cohort analysis, and clinical trials - back into patient care as quickly as possible. This is a breakthrough in medicine for the 21st century, improving health prevention and the quality of patient care, speeding up the diagnostic process of diseases, and making healthcare more cost-effective.

The TMF aims to contribute to the development and nature of translational research in Hungary with the results of raising the health quality of Hungarian citizens. These activities are fully non-profit for the benefit of the public as well as it is carried out in a transparent and accessible way, to disseminate science-based medicine throughout Hungary. Within this framework, the TMF's mission is to implement the results of scientific research into patient care as soon as possible.

These four values are cardinal for the operation of the foundation:

- 1. Innovation.
- **2. Excellence:** to conduct high-quality scientific work and to encourage others to do the same.
- **3. Commitment:** committed to supporting and advocating the recognition of the importance of science based medicine.

4. Ethical conduct: accountability and commitment to ethical professional practice.

In pursuing these values, the foundation will work towards the following objectives:

a) promoting the practical application of scientific results and innovations in health care,

**b**) stimulating and standardizing the exchange of information and data between universities, hospitals, and research centers, and facilitating their quality control, which can significantly improve the quality of multicenter research and reduce the resources needed for research,

c) helping all members of the

population (including healthy individuals, patients, doctors, etc.) to understand and implement evidence-based knowledge in their daily lives through different platforms (web, printed materials, videos, etc.),

**d**) participating in the organization of conferences and training courses, and the funding of research-related procurement, services, and human resource searches and selection.

To achieve the above objectives, the TMF Board of Trustees Chair has made the Electronic Clinical Data Management System (ECDMS), a data management and quality control system, available to the foundation free of charge under a user agreement. The TMF is entitled to grant the right of use to universities, hospitals, and research institutions, following the above values and objectives.

The TMF has also created blended education video materials that are available for free to Hungarian universities for the education of students on public scholarships. This is also available for students in feepaying courses if their university donates a certain percentage of their fees to support the foundation's objectives.

### **BLENDED EDUCATION** HYBRID PHD AND MEDICAL/HEALTHCARE TRAINING PROGRAM

Our Hybrid PhD and Medical/Healthcare Training Program at the CTM provides students with the opportunity to engage in patient care and academic activity simultaneously. Within the framework of the training, they acquire clinical research methodologies using the "learning by doing" method through independent scientific projects. They are provided the opportunity to join workgroups, participate in meta-analysis, studies related to different registers and in clinical work.

The program helps students to become critical consumers of medical research papers, to gather primary data on health issues through questioning and observation of patients and to conduct biomedical research. Students will gain an understanding of the planning of clinical research, including meta-analysis, patient registries and clinical trials, by designing an extended project in study groups, which are led by experienced members of CTM.

We use the following teaching methods:

#### **E-learning:**

To provide the most support and convenience for students we created an e-learning program to decrease the number of courses that require attendance. These online lectures are available in 5 topics, but our online course database is constantly expanding. The courses are held by internationally distinguished scientists and contain tests at the beginning and end of each video, so students can better follow their learning process. These are carried out based on individual timetables, but they must be completed before the given personal course. Completion means finishing the opening and closing tests. A minimum of 75% of the points must be achieved on the final test.

#### **Group meeting:**

It gives great opportunity to run inter- and multidisciplinary discussions. Weekly meetings help with monitoring the learning process and encourage a better quality of work. Discussions take place in person. Participants of the group discussion: all PhD students in the group, supervisor, group leader, CTM staff, and TDK students. Attendance at the group meetings is mandatory for everyone. The time of the group meeting remains constant throughout the year and is expected to last 2-2.5 hours.

#### **Class meeting:**

It is organized for promoting education and knowledge practice while weekly project meetings focus on discussing projects and in-depth observation of the research projects while providing expert consultations. The groups are divided into classes, and class meetings are held on a class-by-class basis. Each course is held on separate days. Attendance is mandatory for all PhD students. Otherwise, we cannot credit the course. TDK students and supervisors are also recommended to join. The courses will are in-person and last 6 hours with breaks.

#### **Project meeting:**

The PhD student, supervisor, TDK student, and SMS/statistician have to participate in the project meetings weekly. The meetings are mainly held online (e.g., Zoom), if necessary in person.

**Seminars:** Every year CTM organizes several seminars for our students. We invite outstanding researchers who can provide a career path model. The seminars are open to anyone, but PhD students are required to attend.

**Progress Report (PR):** PRs are organized every 3 months by class. Attendance is mandatory for everyone. Replacement on another day is not possible. During the PR, an 8/10-minute presentation will be followed by a 4-minute discussion, during which the audience is free to ask questions about the projects. The purpose of PR is to monitor the progress of students and their projects, to help everyone developing presentation techniques and building relationships with members of other students.

**IT support:** We use Moodle to manage the tasks that arise during the training. It provides support for storing personal data, e-learning for training, project tracking, attendance sheet management, peer-to-peer communication, forums, and calendar management.

Students will also cooperate on each other's projects during the program, so by the end they will have 1-2 first author and multiple co-author publications, which can then serve as the basis of their PhD.

#### EXPERT SUPPORT

The following experienced scientists will provide support for the students:

1) The group leaders are experienced physician-scientists who are well known representatives of their field and have a record of high level research productivity.

**2)** An **expert discussant** is appointed for each group. They are a highly experienced physician-scientist who provide help from the design of the study until the publication. They help the students (1) to polish their projects, (2) to find the big picture and (3) challenge them on a weekly basis.

**3)** The **scientific supervisors** of each fellow are senior clinicians (experts) who raise relevant clinical questions, determine the direction of the research and bridges the gap between the theoretical and clinical work within the clinical PhD program. This supervisor continuously leads the research work of the fellows during the whole program.

**4)** Scientific methodology supervisors are a methodologist who has experience in designing and carrying out translational research projects and provides methodological support in various aspects of science including meta-analysis, patient registries, and clinical trials.

**5)** Educational supervisors are expert in the various fields that are being taught through courses to the fellows. Such courses include meta-analysis, patient registry, clinical trial, biostatistics, data handling and clinical pharmacology.

6) Statisticians are appointed to each group to provide valuable help for the statistical work of the project.

#### INTERDISCIPLINARY RESEARCH SUPPORT

Our centre has begun building an interdisciplinary research support team to support the work of researchers and PhD students in numerous areas. The **scientific methodology team** provides a basic professional background in the development of courses, and in the design and implementation of patient registries, meta-analysis and clinical trials. The **IT group** offers support in the development of multi-centre registries, clinical trials, and the **biostatistics group** aids in the planning of data collection as well as the analysis of incoming data. Clinical research is also supported by the **central administrative service**, e.g. through the preparation and submission of documents for ethical permissions. The **legal team** helps researchers comply with ethics and GDPR rules. The communication team supports the design, preparation and dissemination of education and information materials.

We use Moodle to manage the tasks that arise during the training. It provides support for storing personal data, e-learning for training, project tracking, attendance sheet management, peer-to-peer communication, forums, and calendar management.

#### HEADS OF THE PROGRAM



PÉTER HEGYI Director



**GÁBOR VARGA** Operative Director



**RITA NAGY** 1st year Coordinator



SZILÁRD VÁNCSA Ph.D Program Coordinator

#### LIFETIME CAREER MODEL

Besides "learning by doing", "learning by teaching" is our other main motto.

The CTM offers an outstanding seven-step progression system for our students.

Firstly, the beginning of the education process starts with a **Scientific Methodology Learner (SML)** (also known as TDK student) position, where regular attendance (above 75%) at group and projects meetings are required. It comes with great benefits such as, participation in research, direct recruitment opportunity, co-authorship and an MD-PhD option for the following year.

Moving on to the next level, students become **Science Methodology Practitioners (SMP)** (also known as Year 1. PhD students). This position provides the benefits of participating in the course and getting free help such as statistician support, provision data management background, IT support, and provision of WEB, international network.

Entering the second year of the PhD program, students are able to progress and move on to the next step in the seven-step progression system which involve teaching opportunities of Year 1 students. Students become **Science Methodology Supervisors (SMS)**, which comes with an expectation of being the winner of the month (automatic), Student Excellence Award, and appropriate motivation. The benefits that come with being an SMS are providing a job within the CTM as well as a co-authorship position.

Step four in the progression is **Science Methodology Advisor (SMA)**. The conditions to become an advisor are passing a complex exam, availability of first-authored articles required for own PhD, and a suitably motivated attitude. The higher the expectations, the bigger the benefits get, these are, a position being provided within the CTM EUROSTAT database will be provided alongside an AE membership, and lastly, a co-authorship will come with the position.

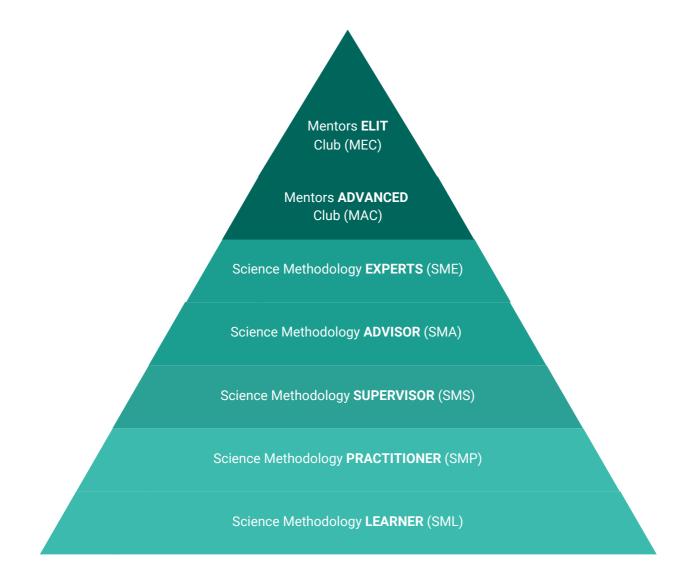
The last three steps of the progression system are based on advanced statistical training. **Science Methodology Experts (SME)** are students who reached step five due to a special invitation. The following benefits are provided for this position. Leadership position where the student will participate in training to support leadership, provision of a position within the CTM and scholarships for training abroad, access to EUROSTAT database and AE membership, co-contracting, and advanced statistical training. Last but not least, it comes with the benefit of admission to the MTA Youth Chapter and with a nomination to the Young Academy of Europe. Following the expert level one can join the **Mentors Advanced Club (MAC)** if the following conditions are completed, after one year of group meeting attendance exceeding 50% or one is the winner of the month (automatic), and lastly the students previously have been an SMA. As each level of progression this comes with benefits as well. These are pre-registration of PhD students, one meeting per month to discuss questions and difficulties and lastly a reception of foreign students.

The last step in the seven-step progression system is joining the **Mentors Elite Club (MEC)**. For this opportunity one has to fulfil the expectations of attending meeting for over 75% of the time and activity after one-year group meeting or previously being an SME or recruitment companies, and assisting coordinators and SMS. The great benefits of this club is a group leader position, PhD student's pre-registration, one meeting per month, access to EUROSTAT database and AE membership, possibility to host foreign students, payment of the costs of guest speakers from abroad and statistical analysis of own projects.

Every month, CTM awards the best performing student and supervisor in each year level. In addition, the best group, SMS, statistician and project student in the first year is also awarded.

All awards are based on availability, effort and creativity. In addition, for SMSs

coordination skills and methodological knowledge are also taken into account. For students, the level of presentation skills is a separate criterion, and the activity and contributions of group leaders in meetings are assessed separately.



# EDUCATION STATISTICS

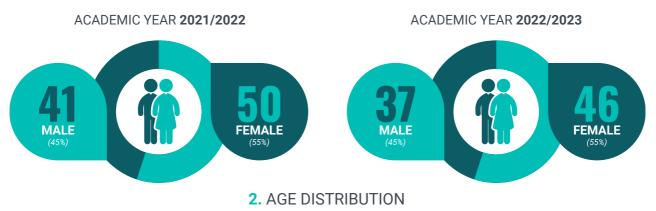
In the following section with the use of figures and statistics, we would like to present the first two years of our PhD program. During this academic year, our 45 staff members are training 458 students from different groups, such as first- and second-year PhD students, TDK students, supervisors and students who are only taking a single course at the Centre.

From September, we were able to increase the percentage of the PhD students enrolled to our program within all PhD students from 32% to 36% at SU, meanwhile both the national and international visibility and respect of our program has increased welcoming students from 23 hospitals and 10 different countries.

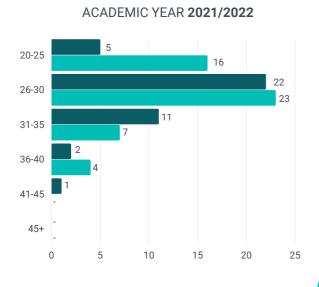
Our second-year students had a particularly successful year regarding their academic performance, with 213 research projects started last year, including 57 publications, representing nearly 400 impact factors. The quality of these projects is also outstanding, proving that by publications appearing in Q1 journals and 12 of them have also received D1 ratings.

#### **1. GENDER DISTRIBUTION**

Our program strongly stands by the idea of gender equality, with the supporting evidence of the exceeding number of female students enrolled into the program. Having a higher number of female students than male students in attending the program this year, shows that we are providing an equal opportunity for everyone regardless of their gender.

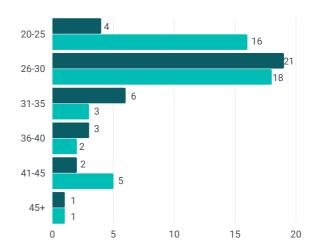


With our motto being that science should play a prominent role throughout the career of healthcare professionals this program doesn't have an age limitation. From recent graduates to experienced specialists we are providing an opportunity for every age group to further develop their scientific skill, eagerness to learn and their love for science.



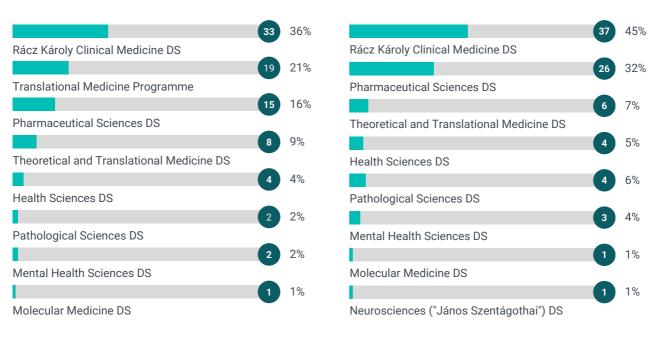
MALE FEMALE

#### ACADEMIC YEAR 2022/2023



#### **3.** CHOSEN PROGRAMME

There is a significant interest from all doctoral schools of Semmelweis University for our PhD program. Meanwhile in both academic years the highest number of applications were received from the Károly Rácz and the Pharmaceutical Sciences Doctoral Schools.

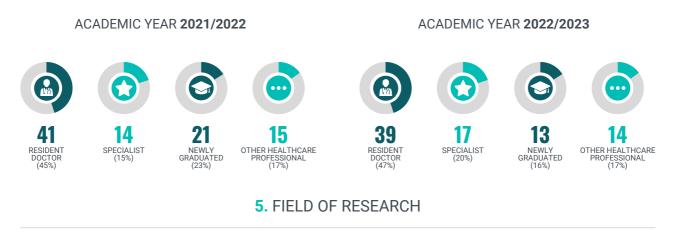


ACADEMIC YEAR 2021/2022

#### ACADEMIC YEAR 2022/2023

4. OCCUPATION

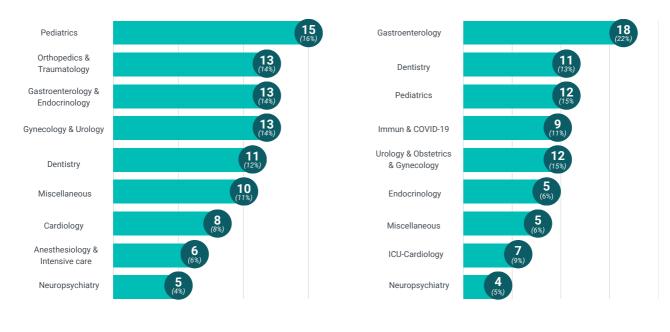
Regardless of a high number of PhD students being residents, the participation is not restricted to a medical degree. The program has also an increased number of students from other health sciences such as, dietetics and pharmacy; further welcoming medical doctors for example who have already specialized in their field.



During both years students work in groups according to their specialization. The most popular research field within the first-year attendees were pediatrics, orthopedics, gastroenterology, and endocrinology. Entering the second year the interest of the students strongly shifted towards gastroenterology making this field the most popular during the year.

#### ACADEMIC YEAR 2022/2023

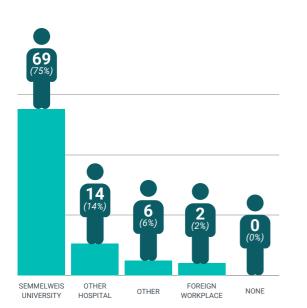
#### ACADEMIC YEAR 2021/2022



#### 6. CURRENT WORKPLACE

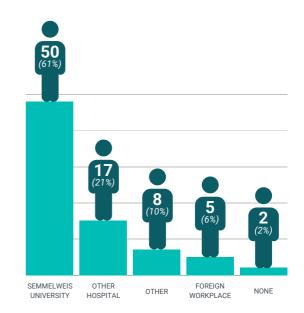
Both SU and CTM members believe that doctoral training should not be limited to students working at the university clinics but should provide opportunities for professionals working in non-university hospitals to serve science. Semmelweis University plays a key role in the education and training of health sciences professionals in Hungary. This year, in addition to the increased number of students working in external hospitals, the rate of enrolment by foreign students has significantly increased thanks to the successful recruitment.

#### BASED ON THE TYPE OF THE WORKPLACE



ACADEMIC YEAR 2021/2022

#### ACADEMIC YEAR 2022/2023



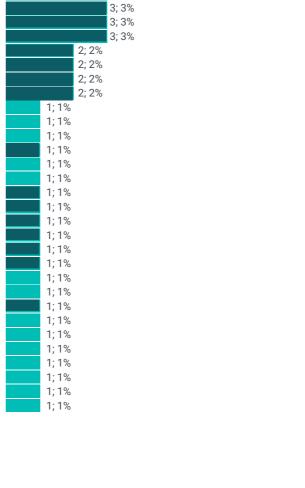
This program is also very popular at the clinics of SU, since the number of clinics delegating students to the training exceeded the number of 20 in both years. Many students are also welcomed from external hospitals, with a large number coming from Heim Pál Hospital and Bajcsy Zsilinszky Hospital.

#### ALL THE WORKPLACES LISTED

#### ACADEMIC YEAR 2021/2022

SU, Dep. of Obstetrics and Gynaecology SU, Heart and Vascular Centre SU, Dep. of Orthopaedics SU, Dep. of Traumatology SU, Dep.t of Prosthodontics Other Heim Pál National Pediatric Institute, Budapest SU, Centre for Pancreatic Diseases SU, University Pharmacy Dep. of Pharmacy Administration SU, Second Dep. of Paediatrics SU, First Dep. of Paediatrics SU, Faculty of Health Sciences SU, Dep. of Urology SU, Dep. of Oral Biology SU, Dep. of Community Dentristry SU, Dep. of Conservative Dentistry SU, András Pető Practice Primary School Albert Schweitzer Hospital, Hatvan SU. Alumni Directorate Bajcsy-Zsilinszky Hospital and Clinic, Budapest SU, Basic and Translational Medicine Bethesda Children's Hospital, Budapest Central Military Emergency Hospital "Dr. Carol Davila", Bucharest SU, Centre for Translational Medicine SU, Dep. of Forensic Medicine SU, Dep. of Internal Medicine and Haematology Dep. of Orthopedics and Traumatology, University of Pécs SU, Dep. of Transplantation and Surgery SU, Dep. of Dermatology Dep. of Gastroenterology, Hungarian Army Medical Center, Budapest Dep. of Neurology, Bajcsy-Zsilinszky Hospital and Clinic, Budapest SU, Dep. of Psychiatry and Psychotherapy Fundeni Clinical Institute, Bucharest Gottsegen National Cardiovascular Center, Budapest Institute for Translational Medicine, University of Pécs Jahn Ferenc South-Pest Hospital and Clinic, Semmelweis University Self employed Szent György Hospital, Székesfehérvár

Szent Kristóf Clinic, Budapest



9; 10%

7; 7% 7; 7%

6;6%

5; 5%

4;4%

4; 4%

4; 4%

3; 3%

3; 3%

#### ACADEMIC YEAR 2022/2023

SU, Dep. of Obstetrics and Gynaecology						(	9; 11%
SU, Heart and Vascular Centre					6; 7%		, 11/0
SU, Dep. of Prosthodontics				5; 6%	0,770		
SU, Dep. of Surgery, Transplantation and Gastroenterology				5; 6%			
Heim Pál National Pediatric Insitute			4; 5%	0,010			
SU, Centre for Pancreatic Diseases			4; 5%				
Bajcsy-Zsilinszky Hospital		2; 2%	7, 5%				
ELTE		2; 2%					
National Institute of Mental Health, Neurology and Neurosurgery		2; 2%					
Other		2; 2%					
SU, Dep. of Community Dentistry		2; 2%					
SU, Dep. of Dermatology, Venereology and Dermatooncology		2; 2%					
SU, Dep. of of Emergency Medicine		2; 2%					
SU, 2nd Department of Pediatrics		2; 2%					
SU, Dep. of Urology		2; 2%					
Szent Margit Hospital		2; 2%					
University of Debrecen		2; 2%					
Candena Slovakia	1; 1%	,					
Cognizant Hungary	1;1%						
Csolnoky Ferenc Hospital, Veszprém	1;1%						
Hungarian Startup University Program, SIROWA Hungary Kft.	1;1%						
Toldy Ferenc Hospital	1;1%						
On-line Oncologic Outpatient Care Project – UFRN	1;1%						
Preventrend Kft.	1;1%						
SU, Dep. of of Anesthesiology and Intensive Therapy	1;1%						
SU, Institute of Conductive Education	1;1%						
SU, Dep. of Obstetrics and Gynaecology (MD-PhD)	1;1%						
SU, Dep. of Oro-Maxillofacial Surgery and Stomatology	1;1%						
SU, Dep. of Orthopaedics	1;1%						
SU, Dep. of Paediatric Dentistry and Orthodontics	1;1%						
SU, Dep. Of Pharmacy	1;1%						
SU, Dep. of Pharmacognosy	1;1%						
SU, Dep. of Psychiatry and Psychotherapy (PhD Student)	1;1%						
SU, Dep. of Radiology	1;1%						
SU, Dep. of the Restorative Dentistry and Endodontics	1;1%						
Szent Borbála Hospital, Dep. of Gynecology	1;1%						
Szent János Hospital	1;1%						
University Hospital Martin and Jessenius Medical Faculty, Martin, Slovakia	1;1%						
Wenzhou Medical University Affiliated Quzhou Hospital	1;1%						
Yueqing People's Hospital	1;1%						
Zala County Hospital Szent Rafael	1;1%						
Zhejiang Chinese Medical University	1;1%						

# OUR CENTRE'S ORGANOGRAM

# **OFFICIALS**



**PÉTER HEGYI** Director of the Centre



**PROF. GÁBOR VARGA** General & Operative Vice Director



#### DÓRA CZAPÁRI

Vice Director responsible for applications, communication and network development



#### **ANDREA HARNOS**

Vice Director of statistics and educational development



#### SZILÁRD VÁNCSA

TM Pogram Manager, Scientific methodology consultant, Clinical trial coordinator



**RITA NAGY** Vice Manager of TM program, Scientific methodology consultant

# **STATISTICIANS**



**ANDREA HARNOS** 

**STATISTICIANS** 



**ZSOLT ABONYI-TÓTH** 



ÁDÁM ZOLCSÁK



**GERGELY AGÓCS** 





PÉTER FEHÉRVÁRI



TAMÁS KÓI



NOÉMI GEDE



PÉTER HÁRSFALVI



**NELLI FARKAS** 





**ALÍZ FAZEKAS** 



**ZOLTÁN SIPOS** 

**ANNA WALTER** 





PÉTER MÁTRAI

EDUCATIONAL DEVELOPMENT



**ERIKA SZENTIRMAI** Educational developer



HORVÁTH KINGA KINCSŐ Educational developer



**ZSÓFIA MAGYAR** Educational developer

# **SME-SMA-SMS**



SZILÁRD VÁNCSA SME



**RITA NAGY** SMA





**BRIGITTA TEUTSCH** SMA

SMS

**MARIE ENGH** 

SMA





TAMÁS FAZEKAS





**MAHMOUD OBEIDAT** 



**ANETT SZABÓ** 

**KATA KELEMEN** 

MÁRK HERNÁDFŐI





**ESZTER SZALAI** 





**ALEXANDER** 

**SCHULZE WENNING** 

**ANETT RANCZ** 



**CANER TURAN** 

**FANNI MEZNERICS** 

**GANAA GARMAA** 

### **TENDER, COMMUNICATION AND NETWORK DEVELOPMENT GROUP**



DÓRA CZAPÁRI Vice Director responsible for applications, communication and network development

#### INTERNATIONAL RELATIONS



**VIKTÓRIA BARNA** International relations and Horizon 2020 project manager



**XINYI QIAN** International coordinator

#### COMMUNICATION



NÓRA KEREKES Communication coordinator



**VIKTÓRIA KOCSIS** Communication coordinator



**LILI FEKETE** Communication coordinator

#### SECRETARIAT



ATTILA MÁRTA Online communication coordinator



Event organizer



LILLA SENTÉNYI Secretary



**BRIGITTA TAKÁCS** Secretary



**ÁGNES TICHYNÉ CSONTOS** Secretary

# MENTORS ELITE CLUB (MEC)

The final step in the seven-step progression system is joining the Elite Mentors Club. To qualify for this opportunity, you must meet the requirements of attending meetings more than 75% of the time and activity after an annual group meeting, or have previously been an SME or recruiter, and assist coordinators and SMS. The big advantages of the club are the position of group leader, pre-registration of PhD students, one meeting per month, access to the EUROSTAT database and AE membership, the possibility to host foreign students, paying the expenses of foreign guest speakers and statistical analysis of own projects.



# MENTORS Advanced Club (MAC)

The almost top level of the career model offered by the Translational Medicine Centre is the Mentors Advanced Club (MAC). Mentors are promoted to the club if they meet the following criteria: after one year, attendance at group meetings exceeds 50%, or one of them is the winner of the month (automatic) and finally, the students have been SMAs before. Like each level of progression, this has its benefits. These include pre-registration of PhD students, a monthly meeting to discuss questions and difficulties, and finally a welcome for foreign students.



LÁSZLÓ Földvári-nagy

22



ORSOLYA Németh



ZSOLT MELCZER



ZSOLT Kopa



GERGELY HOLNAPY

PÉTER JENŐ

HEGYI

# **COLLABORATIONS** WITH INSTITUTES & HOSPITALS



#### **MOL PROGRAM**



The MOL program aims to disseminate both the knowledge of modern clinical science and scientific activity in Romania, and to establish a cooperating network between Romania and Hungary. All Romanian citizens under the age of 35 with a medical degree, an active knowledge of medical English (minimum B2 level), and an interest in biomedical research are eligible to apply to the program.

The selection criteria are based on a point system, where English language skills, previous scientific activity, and clinical knowledge is required among other things. The winning student will receive a monthly stipend of €1000 and their supervisor will receive a €150 stipend each month. The program is 12 months long, with an extension opportunity if needed. In case of the project not being published after the 12-month period an additional 6 months can be used where methodological and statistical support is provided by the CTM. There is also an opportunity for students to extend their scientific training either through a public grant or a remunerated Ph.D. course.

To complete the program active participation in group meetings is required for the entire length of the program. You will also be expected to complete the required coursework, prepare, and submit at least one publication to a journal and present your research results at a scientific conference.

#### **STUDENTS**

2020/2021: Stefania Bunduc, Brigitta Teutsch 2021/2022: Anett Rancz, Cristina Patoni, Emőke Henrietta Kovács 2022/2023: Mihaela Topola, Előd-János Zsigmond



#### STIPENDIUM HUNGARICUM

The Stipendium Hungaricum, the most prestigious higher education scholarship programme of the Hungarian government, was established in 2013. International students with excellent academic records can apply and choose from a wide range of courses. The aim of the scholarship is to support the internationalisation and continuous development of Hungarian higher education, to strengthen the international relations of the academic and research community, and to promote the reputation and competitiveness of Hungarian higher education worldwide.

The programme is based on bilateral education agreements between Hungary and the governments of the sending countries and is already available on five continents, in nearly 90 countries and territories, attracting more than 5,000 international students annually. Applicants are offered more than 600 complete training programmes covering all fields of higher education and all levels of training, including part-time and doctoral programmes.

The Stipendium Hungaricum scholarship programme was established by the Hungarian government to promote the internationalisation of Hungarian higher education and to attract excellent foreign students from all over the world who can develop personal and professional ties with Hungary while receiving a high quality education in the heart of Europe.

#### **STUDENTS**

2021/2022: Mahmoud Obeidat, Bianca Golzio Navarro Calvancante 2022/2023: Isabella Amorim Pinto das Virgens



#### **BILATERIAL PHD EDUCATION PROGRAM**

In the academic year of 2022/2023 the bilateral doctoral program has been launched within the framework of the Translational Medicine Training Program. The training is part of both doctoral programs of Semmelweis University and a collaborative university, where the doctoral degree is awarded bilaterally. The applicant will be enrolled in the Translational Medicine Training Program of SU and will also be admitted to the other collaborating university, involving the opportunity of having a double supervisor from both universities. Regarding to research and papers being published the joint final authorship rules will apply. The PhD students must spend at least their first year at SU, the following 2-4 years can be completed via distance learning. During the PhD course, weekly discussions will be held where the collaborating supervisors is going to be required to participate. As for the current academic year, we have established the collaboration with two universities in this field and with three students undertaking doctoral studies.

#### **CONTRIBUTING INSITUTES**

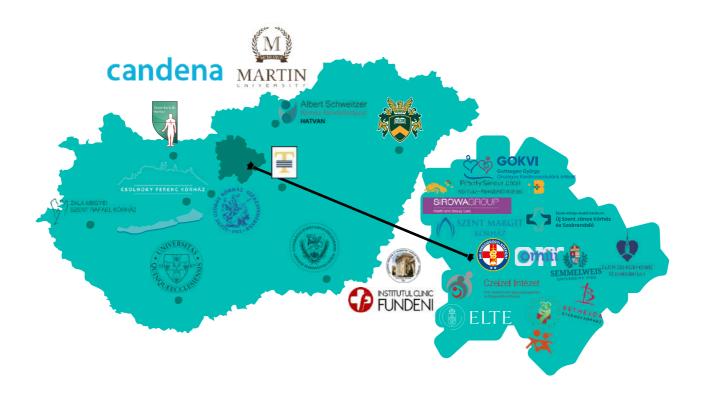
Comenius University Bratislava, Slovakia Grigore T Popa University of Medicine and Pharmacy of Iasi, Romania

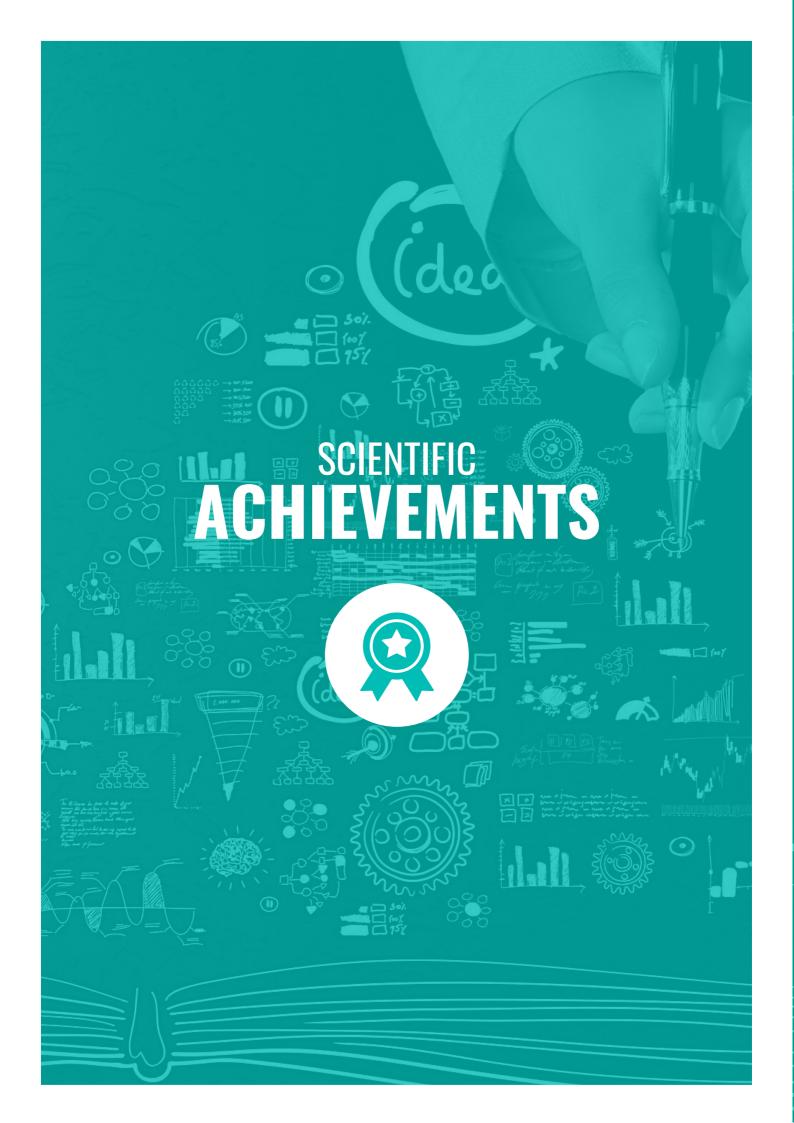


#### **COLLABORATING UNIVERSITIES, HOSPITALS**

A cardinal element of the hybrid doctoral programme is that our students expand their knowledge at the bedside. This requires good collaboration with hospitals. The number of collaborating hospitals is growing dynamically, including both Hungarian and international institutions. Our partners this year include the Fundeni Clinical Institute (Romania), Quzhou People's Hospital (Quzhou City, China).

In order to strengthen the international relations of Semmelweis University, we also cooperate with foreign universities beyond the bilateral training. We have established close relations with WenZhou Medical University (Quzhou, China), Martin University (Slovakia), Carol Davila University of Medicine and Pharmacy (Bucharest, Romania).







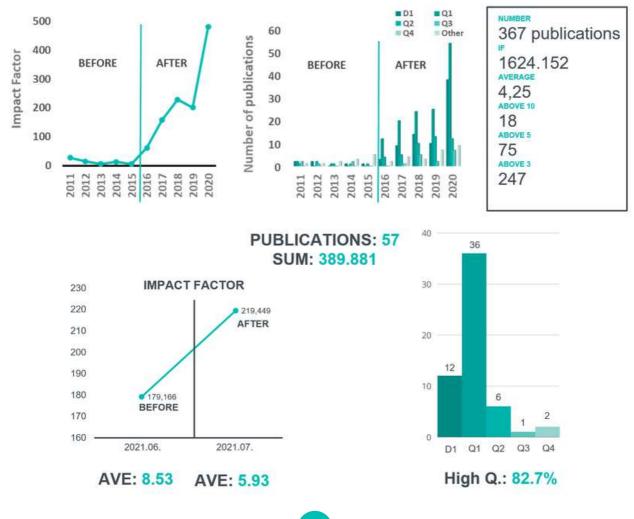


In January 2016, University of Pécs (UP) was the first university in Hungary to innovatively provide the possibility of this new system in Hungary, thereby taking on a completely unique patient care, education and science module.

The Institute for Translational Medicine at UP and the Translational Medicine Foundation with the Academia Europaea have developed and launched the Translational Medicine Programme. Since the start of the Translational Medicine PhD programme in 2016, the number and quality of publications has been improving year by year. Between 2016 and 2022, 326 publications were delivered, with an average impact factor of 4.9.

At the first phase, between 2016 and 2020, there were 179 publications, with an average impact factor of 4.4 and on average, 75% of the publications were published in Q1 journals each year. However, in the period 2021-2022, there were 147 publications (more than twice as much per year) and the average impact factor of the publications exceeded 7.

In 2022, already 87% of the publications were published in a Q1-ranked journal, highlighting that one third of these were D1-ranked publications. In the 2021/22 academic year 213 projects have been started and nearly within a year 6 papers have been published out of them.



### **SCIENTIFIC OUTPUT** TOP PUBLICATIONS OF THE CENTRE

As a result of our high level scientific work and research, we would like to represent our five article with the highest impact factor from each year, from 2016 until now. To see the TOP5 articles each year on PubMed, click on their title.

2022

Alcohol consumption and smoking dose-dependently and synergistically worsen local pancreas damage Gut IF: 31,793
MIF is a Common Genetic Determinant of COVID-19 Symptomatic Infection and Severity Qjm-An International Journal Of Medicine IF: 14,04
Association of Body Mass Index With Clinical Outcomes in Patients With Cystic Fibrosis: A System Review and Meta-analysis Jama Network Open IF: 13,353
Dietary supplementation of transient receptor potential vanilloid-1 channel agonists reduces serum t cholesterol level: a meta-analysis of controlled human trials Critical Reviews In Food Science And Nutrition IF: 11,208
Clinical Frailty Scale (CFS) indicated frailty is associated with increased in-hospital and 30-day morta in COVID-19 patients: a systematic review and meta-analysis Annals Of Intensive Care IF: 10,318
2021
Accelerating the translational medicine cycle: the Academia Europaea pilot Nature Medicine IF: 87,241
Critical thresholds: key to unlocking the door to the prevention and specific treatments for a pancreatitis Gut IF: 31,793
Design and validation of a patient-reported outcome measure scale in acute pancreatitis: the P PROMISE study Gut IF: 31,793
Metabolic signature might be an option to identify patients with early CP

IF: 31,793

Uncertainty in the impact of liver support systems in acute-on-chronic liver failure: a systematic review and network meta-analysis Annals Of Intensive Care IF: 10,318

#### 2020

Alcohol-dependent effect of PRSS1-PRSS2 haplotype in chronic pancreatitis Gut

IF: 23,059

Novel p.K374E variant of CPA1 causes misfolding-induced hereditary pancreatitis with autosomal dominant inheritance *Gut* 

IF: 23,059

Lipotoxicity and Cytokine Storm in Severe Acute Pancreatitis and COVID-19 Gastroenterology IF: 22,682

Analysis of 1060 Cases of Drug-Induced Acute Pancreatitis Gastroenterology IF: 22,682

The negative impact of comorbidities on the disease course of COVID-19 Intensive Care Medicine IF: 17,44

#### 2019

Resection of pancreatic cancer in Europe and USA: an international large-scale study highlighting large variations *Gut* 

IF: 19,819

Genetic determinants of telomere length and risk of pancreatic cancer: A PANDoRA study International Journal Of Cancer IF: 5,145

Germline BRCA2 K3326X and CHEK2 I157T mutations increase risk for sporadic pancreatic ductal adenocarcinoma International Journal Of Cancer IF: 5,145

**Genetic variability of the ABCC2 gene and clinical outcomes in pancreatic cancer patients** *Carcinogenesis* **IF: 4,603** 

Spilanthol Inhibits Inflammatory Transcription Factors and iNOS Expression in Macrophages and Exerts Anti-inflammatory Effects in Dermatitis and Pancreatitis International Journal Of Molecular Sciences IF: 4,556 **Guts and Gall: Bile Acids in Regulation of Intestinal Epithelial Function in Health and Disease** *Physiological Reviews* **IF: 24,25** 

Mitochondrial Dysfunction, Through Impaired Autophagy, Leads to Endoplasmic Reticulum Stress, Deregulated Lipid Metabolism, and Pancreatitis in Animal Models Gastroenterology IF: 19,809

Genome-wide association study identifies inversion in the CTRB1-CTRB2 locus to modify risk for alcoholic and non-alcoholic chronic pancreatitis *Gut* IF: 17,943

Genome-wide meta-analysis identifies five new susceptibility loci for pancreatic cancer Nature Communications IF: 11,878

Steroid but not Biological Therapy Elevates the risk of Venous Thromboembolic Events in Inflammatory Bowel Disease: A Meta-Analysis

Journal Of Crohns & Colitis IF: 7,827

2017

**Smoking and Drinking Synergize in Pancreatitis: Multiple Hits on Multiple Targets** *Gastroenterology* **IF: 20,773** 

**Misfolding cationic trypsinogen variant p.L104P causes hereditary pancreatitis** *Gut* **IF: 17,016** 

**Novel PRSS1 Mutation p.P17T Validates Pathogenic Relevance of CTRC-Mediated Processing of the Trypsinogen Activation Peptide in Chronic Pancreatitis** *American Journal Of Gastroenterology* **IF: 10,231** 

Transpancreatic sphincterotomy has a higher cannulation success rate than needle-knife precut papillotomy - a meta-analysis Endoscopy IF: 6,629

The formin DAAM is required for coordination of the actin and microtubule cytoskeleton in axonal growth cones Journal Of Cell Science 0021-9533 1477-9137 IF: 4,401

**Ca2+ toxicity and mitochondrial damage in acute pancreatitis: translational overview** *Philosophical Transactions of the Royal Society B - Biological Sciences* **IF: 5,846** 

**CFTR: A New Horizon in the Pathomechanism and Treatment of Pancreatitis** *Reviews Of Physiology Biochemistry and Pharmacology* **IF: 4,769** 

**Bile as a key aetiological factor of acute but not chronic pancreatitis: a possible theory revealed** *Journal Of Physiology-London* **IF: 4,739** 

Pathogenic cellular role of the p.L104P human cationic trypsinogen variant in chronic pancreatitis American Journal Of Physiology: Gastrointestinal and Liver Physiology IF: 3,468

A novel, protective role of ursodeoxycholate in bile-induced pancreatic ductal injury American Journal of Physiology: Gastrointestinal and Liver Physiology IF: 3,468

## INTRODUCING OUR STUDENTS

### **INFORMATION** GUIDE

Here you can find a little help on understanding the shown symbols on the students' profiles.

#### **RESEARCH PARTICIPATIONS**

These coloured circles indicating that in how many meta-analyses, registries and clinical trials the student takes part.



#### RECOGNITION OF EXCELLENT PERFORMANCE

To reward our best performing students and colleagues, we created montly awards, which means, that based on the given month, the most dedicated and hardworking members are choosen and given a certificate and an engraved glass statue. Throughout the book you will se little badges near the picture of a student or a colleague, which means that the person has already received that award. Here you can see what kind of awards we have. The numbers on the ribbons refering to the year and month when the award was received.



### ONLINE STUDENT PROFILES



By scanning the QR codes, (or clicking on them in the online version) you can access the profile of the students on our website. Students who already participated on Progress Reports and presented their research progress, videos of the presentation are available there. As we progress through the year, you'll find the videos of our newer students as well.



### YEAR I. STARTED IN

STARTED IN SEPTEMBER, 2022

### **THE 1ST YEAR** All you need to know about it

The goal of Year I is solely focused on learning the basics of research, from asking questions, through learning methodologies, to publishing results in four specific phases. The first phase is concentrating on explaining all the "how to…" -s such as communicating professionally, writing articles, and interpreting scientific results. Phase number two is completing searches, showing results, and presenting those achievements. The following third phase is aiming to use the learning-by-doing method where students have the opportunity to meet and talk with top researchers alongside working on the completion of their search/data summary and presenting their achievements. The last phase of the progress is finishing the first papers and as always presenting the achievement.



· everyone is expected to present their achievements

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### 

Overall, in the first year of the program, PhD students focus on their academic work four days a week and participate in clinical patient care placements only one day a week. In the second year, students are required to conduct their research more independently. From then on, they spend four days a week on clinical patient care, and one day a week, on protected time for scientific research.

The first year is divided into four phases, and at the end of each phase, progress reports are submitted by students. The first year focuses on the learning by doing model. Students will focus on scientific activity, meta-analysis, registry building, and clinical trials, as they will dedicate four days a week to this. In contrast, only one working day per week is allocated to resident work and teaching.

#### In the first phase everyone learns:

- · how to find the most important question,
- how to clarify and simplify the question.
- how to design the project

#### Expectation to achieve

- everyone has to draft their PhD thesis
- everyone has to learn the HDS-TM methodologies
- everyone has to reach the start of data extraction

#### In the second phase, everyone learns

- how to write an article
- how to communicate professionally
- · how to interpret scientific results critically

#### **Expectation to achieve**

- · everyone is expected to complete their search
- everyone is expected to show results
- · everyone is expected to present their achievements

#### In the third phase, everyone learns

• the opportunity to meet and talk to top researchers

#### **Expectation to achieve**

- everyone is expected to complete their search/data summary
- · everyone is expected to present their achievements

#### In the fourth phase, everyone writes his/her paper.

#### **Expectation to achieve**

- · everyone is expected to complete their first paper
- · everyone is expected to present their achievements

### **ACADEMIC CALENDAR OF 1ST YEAR STUDENTS**



FIND THE CALENDAR ONLINE BY SCANNING THE QR CODE OR CLICKING ON IT

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### **ACADEMIC CALENDAR OF 1ST YEAR STUDENTS**

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### GROUP 1 MISCELLANEOUS



#### **INTRODUCTION TO THE GROUP**

The miscellaneous group consists of 15 students and 13 supervisors, who work in various fields of medicine. The group includes disciplines such as radiology, orthopedics, ear-nose-throat surgery, psychology and psychiatry, neurosurgery, physiotherapy, intensive care medicine, emergency medicine, and cardiology. As the group is the most diverse regarding its interests, a multidisciplinary approach to the discussion of clinical topics presents a unique opportunity for both PhD students and supervisors. All students are conducting systematic reviews to improve clinical practice and have a positive effect on their patients' lives. Furthermore, several clinical trials and observational studies are being designed by the students, which will generate high-quality evidence in their fields. The SMSs of the team are Caner Turan and Alex Schulze, who are coordinating a huge variety of topics. Group leaders are Zsolt Molnár, an internationally acknowledged intensivist with a special focus on sepsis, and Gábor Csukly whose main research field is schizophrenia at Semmelweis University.

### **MEMBERS OF THE GROUP**



Group Leader



CANER TURAN Scientific Methodology Supervisor





ALEXANDER SCHULZE Scientific Methodology Supervisor



PÉTER FEHÉRVÁRI Statistician

**STUDENTS:** Arashk Árpád Zabihi, Balázs Dorony, Danuta Szirmai, Dávid Balogh, Dilan Márk Karim, Előd zsigmond, György Gulácsi, Kinga Shenker-Horváth, Klára Borbála Körmendi, Márton Papp, Nikolett Kiss, Orsolya Lányi, Réka Ehrenberger, Richárd Masszi, Szabolcs Gaál

**SUPERVISORS:** István Ferenc Édes, Annamária Kosztin, Béla Merkely, Gábor Duray, Csaba Varga, Zsolt Molnár, Krisztina Madách, Tamás Horváth, Nóra Sydó, Miklós Szendrői, Péter Hegyi, Gábor Csukly, Zsolt Szabolcs Unoka, András Attila Horváth

### ARASHK ÁRPÁD ZABIHI





#### PROJECT DESCRIPTION

My name is Zabihi Arashk. I work as a practitioner physician in the field of neurosurgery at the Hungarian Army Medical Centre in Budapest. My focus of interest is minimally invasive neurosurgical interventions in patients with drug-resistant epilepsy. My first specific goal is to investigate whether MR-guided stereotactic laser interstitial thermal therapy (MRgLITT) provides a better postoperative rate of freedom from seizure than Stereo-electroencephalography-guided radiofrequency thermocoagulation (SEEG RF-TC).

AGE 28 years SUPERVISOR(S) András Horváth E-MAIL zabihi\_arashk@outlook.com

### BALÁZS DORONY SEMMELWEIS UNIVERSITY, DEPARTMENT OF ORTHOPAEDICS





#### PROJECT DESCRIPTION

I am a resident at the Department of Orthopaedics, Semmelweis University. My main clinical interests are surgical management of bone and soft tissue sarcomas, arthroplasty of the knees and hips and the biomechanics, diagnostics, and rehabilitation of sports related injuries. Currently I am investigating the efficacy and safety of different hemipelvectomy techniques in patients with pelvic sarcomas. The goal of my research is to prove that internal hemipelvectomy can be just as radical and safe as external hemipelvectomy for patients with pelvic sarcomas.

**AGE** 25 years SUPERVISOR(S) Miklós Szendrői E-MAIL dorony.balazs@gmail.com

### **DANUTA** SZIRMAI

NATIONAL INSTITUTE OF MENTAL HEALTH, NEUROLOGY AND NEUROSURGERY





### PROJECT DESCRIPTION

I am a neurologist resident at the National Institute of Mental Health, Neurology, and Neurosurgery (National Institute of Neuroscience). My first project in the PhD program is a systematic review and metaanalysis about assessing the prognostic power of EEG connectivity measures in patients with chronic disorders of consciousness (DOC). My main objective is to examine whether EEG connectivity measures can improve the prognostication of patients with DOC, compared to clinical measures. My clinical research topic is the multimodal analysis of disorders of consciousness in post-stroke patients. With my group, we aim to determine prognostic factors of recovery based on EEG connectivity changes and understand the effects of early mobilization on recovery from DOC in patients after subarachnoid hemorrhage and post-stroke.

AGE 29 years SUPERVISOR(S) András Horváth E-MAIL danuta.petals@gmail.com

### **DÁVID BALOGH** SEMMELWEIS UNIVERSITY, DEP. OF PSYCHIATRY AND PSYCHOTERAPY





### PROJECT DESCRIPTION

I am a medical doctor and a PhD student at the Doctoral School of Mental Health Sciences, Semmelweis University. I am in the process of completing my MA degree in philosophy at ELTE as well. In my research, I am focusing on suicidal behavior, particularly in borderline personality disorder. My vision is that to prevent suicidal behavior in patients we need to understand suicidality. My first topic is the investigation of the risk factors of suicidal behavior, while my second topic investigates the connection between premenstrual and borderline personality symptoms.

**AGE** 29 years SUPERVISOR(S) Szabolcs Zsolt Unoka E-MAIL davidbalogh01@gmail.com

### DILAN MÁRK KARIM

SEMMELWEIS UNIVERSITY, ANESTHESIOLOGY AND INTENSIVE CARE CLINIC





### PROJECT DESCRIPTION

I studied at Semmelweis University and currently I am working as a resident doctor in the Anesthesiology and Intensive Care Dpt. with my supervisor, where we started an observational study 2 years ago. We are collecting data regarding microbiome changes during critical illness. My meta-analysis focuses on the relationship between dysbiosis and different clinical outcomes in the critically ill.

AGE 32 years SUPERVISOR(S) Krisztina Madách, Zsolt Molnár E-MAIL dilan.karim@gmail.com

### ELŐD-JÁNOS ZSIGMOND



SEMMELWEIS UNIVERSITY, DEP. OF PSYCHIATRY AND PSYCHOTERAPY



### PROJECT DESCRIPTION

I just graduated medical school (MOGYTTE - Marosvásárhely), now I am working as a volunteer at the Hungarian Army Medical Centre's Cardiology Department. My main research field is cardiac pacemaker therapy. Currently I am investigating the effect of device optimization in cardiac resynchronization therapy.

**AGE** 25 years SUPERVISOR(S) Gábor Duray E-MAIL zsigmond\_elod@yahoo.de

### **GYÖRGY GULÁCSI** SEMMELWEIS UNIVERSITY, DEP. OF RADIOLOGY





### PROJECT DESCRIPTION

I work for the Medical Imaging Centre at Semmelweis University as a board-certified MSK radiologist and the head of MSK imaging. My main clinical interests are sports imaging radiology and bone and soft tissue imaging. My first project is about the potential benefit of using newer MRI techniques for the assessment of chondrogenic tumors. Due to the scarcity of the literature within this field I am planning to create my own research on this topic using the National Bone Tumor Registry of the university.

AGE 36 years SUPERVISOR(S) Miklós Szendrői E-MAIL gulacsi.gyorgy@semmelweis.hu

### KINGA SHENKER-HORVÁTH SEMMELWEIS UNIVERSITY, HEART AND VASULAR CENTRE





#### PROJECT DESCRIPTION

I am a dietitian and a nutritionist, I obtained my Bachelor's and Master's degree in Nutrition at Semmelweis University Faculty of Health Sciences, Budapest, Hungary. Currently I am a 2nd year PhD student at Semmelweis University School of Theoretical and Translational Medicine. My PhD studies is in sports cardiology and performance diagnostics at Semmelweis University Heart and Vascular Centre. I also work at the Centre for Sports Nutrition Science of the Hungarian University of Sports Science in Budapest, Hungary as a dietitian and a lecturer. My main research fields are carbohydrate metabolism and sports performance, laboratory and field performance assessment, supplementation strategies for athletes and body composition analysis.

**AGE** 41 years SUPERVISOR(S) Nóra Sydó E-MAIL shenkerhorvathkinga@gmail.com

### **KLÁRA BORBÁLA KÖRMENDY** BAICSY-ZSILINSZKY HOSPITAL AND CLINIC





### PROJECT DESCRIPTION

I am a first-year otorhinolaryngology resident at Bajcsy-Zsilinszky Hospital and Clinic. My field of interest is middle ear surgery, more specifically cholesteatoma staging systems. Currently, I am working on a meta-analysis of the validity of the EAONO/JOS cholesteatoma staging system. With these projects, we aim to help clinicians select adequate surgical therapy and improve our ability to manage patients' expectations.

**AGE** 25 years SUPERVISOR(S) Tamás Horváth E-MAIL borbkoerm@gmail.com

### MÁRTON PAPP NEW SZENT JÁNOS HOSPITAL AND CLINIC





#### PROJECT DESCRIPTION

I have been working in St. John Hospital since 2013, as an anesthesiologist specialist since 2018. My main research filed is sepsis, dysregulated immune response, and organ dysfunction in critically ill patients. My exact research topic is investigating the effects of procalcitonin-guided antibiotic therapy versus standard treatment in sepsis.

**AGE** 35 years **SUPERVISOR(S)** Zsolt Molnár, Domonkos Trásy E-MAIL manolo87@gmail.com

### NIKOLETT KISS

SEMMELWEIS UNIVERSITY, HEART AND VASCULAR CENTRE





### PROJECT DESCRIPTION

I am an anaesthesiologist at Semmelweis University. I work at the Heart and Vascular Centre Anesthesia and Intensive Care Unit. My main interest is perioperative complications related to cardiac surgery and open abdominal aortic procedures.

AGE 40 years **SUPERVISOR(S)** Zsolt Molnár, László Zubek **E-MAIL** kiss.nikolett@med.semmelweis-univ.hu

### **ORSOLYA LÁNYI** SEMMELWEIS UNIVERSITY DEP. OF PSYCHIATRY AND PSYCHOTHERAPY





### PROJECT DESCRIPTION

I am a cognitive psychologist working on my PhD in the field of clinical neuroscience, while also working as a clinical research assistant at the Semmelweis University Department of Psychiatry and Psychotherapy. My main research interests are potential biomarkers of schizophrenia and the psychosis spectrum, neuroimaging, and computational psychiatry. The first project I chose is a meta-analysis on the assessment of transcranial magnetic stimulation (TMS) and electromyography (EMG) protocols in schizophrenia. TMS-EMG provides insight into the motor cortical excitatory and inhibitory imbalance, a potential pathophysiological marker of schizophrenia. As a second project, I plan to further investigate neurophysiological markers of schizophrenia with fMRI or EEG.

**AGE** 25 years SUPERVISOR(S) Gábor Csukly E-MAIL lanyi.orsi@gmail.com

### RÉKA EHRENBERGER

SEMMELWEIS UNIVERSITY, HEART AND VASCULAR CENTRE





### PROJECT DESCRIPTION

I am a first-year PhD student at the Doctoral School of Theoretical and Translational Medicine participating in the Translational Medicine Program, also I am an active member of the Hemodynamics Working Group at the Heart and Vascular Centre since 2020. My focus of interest is interventional cardiology from several aspects, namely the treatment of calcified coronary artery disease, hemostasis of arterial puncture points, the intervention of small caliber coronaries, and the treatment of in-stent restenosis. My first project is a meta-analysis and a systematic review on the topic of treatment optimization for calcified coronary lesions with rotational atherectomy and combined dedicated devices. My second project is a randomized controlled trial comparing two noncompression-based devices for hemostasis of the femoral and brachial arterial puncture points.

AGE 24 years **SUPERVISOR(S)** István Ferenc Édes E-MAIL reka.ehrenberger@gmail.com

### RICHÁRD MASSZI SEMMELWEIS UNIVERSITY, HEART AND VASCULAR CENTRE





### PROJECT DESCRIPTION

I am a second-year PhD student at the Doctoral School of Basic and Translational Medicine, Semmelweis University. My research topic is the investigation of the pathomechanisms of heart failure and new methods for its treatment with and without drugs under the supervision of Kosztin Annamaria and Béla Merkely. I am also doing my cardiology residency at Városmajor Heart and Vascular Center. I started my student scientific work at Városmajor in 2017 with the heart failure workgroup. My first project is a meta-analysis of the predictive value of scar burden assessed by cardiac MRI on sudden cardiac death in cardiac resynchronization therapy patients. My second project is investigating the diuretic effects of Sodium-Glucose Cotransporter 2 Inhibitors compared to conventional diuretics in acute heart failure.

**AGE** 27 years **SUPERVISOR(S)** Annamária Kosztin, Béla Merkely E-MAIL masszi.richard@gmail.com SZABOLCS GAÁL NATIONAL KORÁNYI INSTITUTE OF PULMONOLOGY





### PROJECT DESCRIPTION

I am an emergency physician who is not only interested in critical care, but in science, medical education, public health, prevention, and lifestyle medicine as well. I am currently working at the Department of Emergency Medicine at Semmelweis University. It was a longtime dream of mine to get involved in research and finally, the time has come. I am excited and happy to be part of the team of CTM.

**AGE** 35 years SUPERVISOR(S) Csaba Varga, Zsolt Molnár E-MAIL gaal.szabolcs@med.semmelweis-univ.hu

### GROUP 2 DENTISTRY



#### **INTRODUCTION TO THE GROUP**

The Dentistry group consists of 12 students and their respective mentors, from various specialties and Departments such as the Department of Prosthodontics (6), Department of Anatomy (2), Department of Community Dentistry(2), Department of Oro-Maxillofacial Surgery and Stomatology (1) and Department of Paediatric Dentistry and Orthodontics (1). With the variety of departments involved, the main interests of the group include Implantology and augmented reality, Minor oral surgery management, Periodontal outcomes in chronic diseases, Oral Health Education Programs, Children Developmental Enamel Defects, Orofacial clefts management, Oromaxillofacial reconstruction, Smoking pattern and types on periodontal health status, Different Implant placement and loading protocols, Vital Pulp therapy with different materials and Additive manufacturing. Currently, regarding the projects, a total of 11 meta-analyses (MA) are being developed, with 16 interventional, 2 etiology, and 1 prognostic MAs, besides 5 clinical trials about to be initiated. The group scientific methodology supervisors are Bianca Golzio and Kata Kelemen. Bianca is a 3rd year PhD student and deputy coordinator of Clinical Trials and Registries at CTM. Kata is a 2nd year PhD student and Prosthodontics specialist. As the group leader we have Varga Gábor, a highly experienced professor and researcher, who is also the Operative Director of TMC and part of the Department of Oral Biology.

### **MEMBERS OF THE GROUP**



**GÁBOR VARGA** Group Leader



BIANCA GOLZIO Scientific Methodology Supervisor



**PÉTER HERMANN** Group Leader



KATA KELEMEN Scientific Methodology Supervisor



**GÁBOR GERBER** Group Leader



PÉTER FEHÉRVÁRI Statistician

**STUDENTS:** Anna Takács, Boldizsár Vánkos, Bulcsú Bnecze, Dalma Tábi, Eszter Hardi, Éva Mlinkó, Madalina Banarescu, Márton Ács, Orsolya Vámos, Péter Gergely Komora, Virág Róna, Xinyi Qian

SUPERVISORS: Noémi Katinka Rózsa, Gábor Varga, János Vág, Beáta Kerémi, Barbara Kispélyi, Dániel Végh, Árpád Joób-Fancsaly, Krisztina Ágnes Mikulás, Orsolya Németh, Zoltán Géczi, Márton Kivovics, Gábor Gerber, Victor-Vlad Costan



### ANNA TAKÁCS

SEMMELWEIS UNIVERSITY, DEP. OF COMMUNITY DENTISTRY





### PROJECT DESCRIPTION

PROJECT DESCRIPTION

I am a PhD student at the Doctoral School of Clinical Medicine while working at the Department of Community Dentistry. My main fields of interest are implantology and augmented reality. My first project is a meta-analysis investigating the accuracy of different implant placement techniques. My goal is to improve patient satisfaction with implants, decrease complications and iatrogenic damage, and achieve better biomechanical and aesthetic results.

AGE 24 years SUPERVISOR(S) Márton Kivovics E-MAIL takacs.anna535@gmail.com

### **BOLDIZSÁR** VÁNKOS



### SEMMELWEIS UNIVERSITY, DEPARTMENT OF PROSTHODONTICS



#### I am a second-year resident at the Department of Prosthodontics, Semmelweis University. Currently I am participating in the 24-month clinical PhD fellowship program. I am working on a meta-analysis on conventional versus additive cast-fabrication in implant prosthodontics. My goal is to make additive manufacturing a widely accepted and popular alternative compared to the conventional pactition in implant prosthodontics as well I am also taking part in

prosthodontics. My goal is to make additive manufacturing a widely accepted and popular alternative compared to the conventional solution in implant prosthodontics as well. I am also taking part in the education of dental students on the field of Prosthodontics in Hungarian and English language.

**AGE** 25 years SUPERVISOR(S) Barbara Kispelyi E-MAIL boldizsar.vankos@gmail.com



### BULCSÚ BENCZE

SEMMELWEIS UNIVERSITY, DEPARTMENT OF PROSTHODONTICS





#### PROJECT DESCRIPTION

I have been working at Semmelweis University Department of Prosthodontics as a resident since September 2021. In my clinical career, I am interested in implantology and implant prosthodontics, digital dentistry, and esthetic dentistry. My first research topic is about investigating the relationship between dental implant complications and glycemic control. I would like to continue my research on the same topic, mainly focusing on diabetes mellitus and its oral complications. I would like to study the topic of digital dentistry as well, since It is a highly researched area thanks to the development of additive manufacturing and its advantages for prosthetic dentistry. I hope that I will be able to provide scientific evidence to promote novel digital technologies to provide highguality, timely, and cost-effective dental care to our patients.

AGE 26 years SUPERVISOR(S) Dániel Végh E-MAIL drbenczebulcsu@gmail.com

**DALMA TÁBI** SEMMELWEIS UNIVERSITY, DEPARTMENT OF COMMUNITY DENTISTRY





### PROJECT DESCRIPTION

I'm a first-year PhD student and I'm currently working at the Department of Community Dentistry as a clinical doctor, but next year I would like to start my orthodontic residency as well. I love children, so it's a great pleasure that with my PhD topic I can improve their relationships with dentistry. With my projects, I would like to assess the benefits of different oral health educational programs in my first topic to provide a health care program to patients with special needs -especially children with disabilities, and develop a method where the children's cooperation and oral literacy can be improved. Now we are working on our clinical trial, as my second topic, where we are developing a specialized dental education program for children with mobility disorders.

**AGE** 26 years SUPERVISOR(S) Orsolya Németh E-MAIL tabidalma@gmail.com



### **ESZTER** HARDI

SEMMELWEIS UNIVERSITY, CENTRE FOR TRANSLATIONAL MEDICINE





#### PROJECT DESCRIPTION

I am a PhD student and a second-year resident at the Department of Oro-Maxillofacial Surgery and Stomatology, Semmelweis University. I am participating in the clinical PhD fellowship program. My main interest is third molar removal, and my project is a meta-analysis investigating the effect of submucosal dexamethasone injection in reducing postoperative complications in lower third molar removal.

AGE 25 years **SUPERVISOR(S)** Árpád Joob-Fancsaly E-MAIL hardi.eszter@gmail.com

**ÉVA MLINKÓ** SEMMELWEIS UNIVERSITY, DEP. OF PAEDIATRIC DENTISTRY AND ORTHODONTICS





### PROJECT DESCRIPTION

I am a clinical specialist in Pediatric Dentistry and Orthodontics, as well as a second-year PhD student at the Department of Pediatric Dentistry and Orthodontics, Semmelweis University. My focus of interest is a type of developmental defect of the enamel, Molar Incisor Hypomineralization (MIH). I am working on a meta-analysis of clinical risk factors which can influence the development of the affected teeth, aiming to establish the strength between early childhood medical problems and MIH, and recognize opportunities for prevention. My other interest is the evaluation of current interventions for Molar Incisor Hypomineralization. Clinical management is a challenge because of the poor quality of the enamel, the aim is to optimize the methods which reduce hypersensitivity, and dental fear, arrest caries progression and help clinicians in decision-making.

AGE 35 years **SUPERVISOR(S)** Noémi Katinka Rózsa, Gábor Varga

E-MAIL mlinko.eva@dent.semmelweis-univ.hu



### MADALINA BANARESCU

SEMMELWEIS UNIVERSITY, CENTRE FOR TRANSLATIONAL MEDICINE





### PROJECT DESCRIPTION

I finished the Faculty of Dentistry, at University of Medicine and Pharmacy "Grigore T. Popa" lasi, in September 2022. My main research field is Cranio-Maxillofacial Surgery. My research topic is: Investigating the surgical time required to treat craniomaxillofacial fractures using Virtual surgical planning and Intraoperative surgical navigation.

AGE 26 years **SUPERVISOR(S)** Gábor Gerber E-MAIL banarescu.madalina@gmail.com

MÁRTON ÁCS Semmelweis University, centre for translational medicine





### PROJECT DESCRIPTION

Márton is a 5th year dental student at Semmelweis University. He joined the Translational Medicine Program in 2021, mainly focusing on orofacial clefts. His first project is a meta-analysis that investigates the effects of maternal health disorders and deleterious habits on the risk of orofacial cleft development. He aims to identify those factors that increase the risk of orofacial cleft development. His second project is also a meta-analysis that investigates the effects of medications during pregnancy on the risk of orofacial clefts formation. His aim is to decrease the incidence of orofacial clefts.

**AGE** 25 years **SUPERVISOR(S)** Gábor Varga, Gábor Gerber E-MAIL acsmarton98@gmail.com



### ORSOLYA VÁMOS

SEMMELWEIS UNIVERSITY, DEPARTMENT OF PROSTHODONTICS





#### PROJECT DESCRIPTION

I am a second-year resident at the Department of Prosthodontics, at Semmelweis University. My main fields of research are alternative tobacco products and dental implants. My first project is a metaanalysis investigating the effect of tobacco products on peri-implant tissues. This study aims to understand the effect of electronic cigarettes, waterpipes, and smokeless tobacco on peri-implant tissue parameters compared to a traditional cigarette. I am also interested in digital dentistry, especially in intraoral scanners and 3D printing.

AGE 28 years **SUPERVISOR(S)** Barbara Kispélyi E-MAIL vamosorsi13@gmail.com

### PÉTER GERGELY KOMORA

SEMMELWEIS UNIVERSITY, DEPARTMENT OF RESTORATIVE DENTISTRY AND ENDODONTICS





### PROJECT DESCRIPTION

I am a clinical specialist in Conservative dentistry and Prosthodontics, and a clinical specialist in Endodontics as well. I also work as an assistant lecturer and I am a participant in a Ph.D. student at the Department of Restorative Dentistry and Endodontics, Semmelweis University, in a 24-month clinical fellowship program at the Institute for Translational Medicine. Next to my university commitment I am the president of the Hungarian Society of Endodontology. My main clinical interest is the endodontics, minimal invasive endodontic interventions, and microscopic endodontic treatments. Therefore, my first project is a meta-analysis on the topic of Comparing the efficacy of bioactive materials in vital pulp therapy. My planned second topic is also a meta-analysis of comparing the different vital pulp therapy treatment options. I am also taking part in the education of dental students in the Department of Restorative Dentistry and Endodontics in Hungarian, English and German language.

**AGE** 41 years SUPERVISOR(S) János Vág E-MAIL komorapeter@gmail.com



### VIRÁG RÓNA

SEMMELWEIS UNIVERSITY, DEPARTMENT OF PROSTHODONTICS



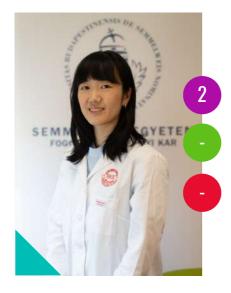
### PROJECT DESCRIPTION

My name is Virág, and I just started my PhD studies in 2022. I am a second-year resident at Semmelweis University, Department of Prosthodontics. In my free time, I like to read as many books as I can or play the piano, as well as I also like to paint with acrylic or oil.

AGE 28 years SUPERVISOR(S) Zoltán Géczi E-MAIL rona.virag@dent.semmelweis-univ.hu

**XINYI QIAN** SEMMELWEIS UNIVERSITY, DEP. OF PROSTHODONTICS





### PROJECT DESCRIPTION

I'm a 1st year PhD student in the Translational Medicine Program and a 2nd year resident at the Department of Prosthodontics. My main fields of interest are gnathology, implantology, and esthetic dentistry, aiming to restore the highest quality of dental function and esthetics. My PhD research area is implant-prosthodontic treatment in the esthetic zone. I am starting my research with a review of the literature on the topic with two meta-analyses I am currently working on. In my first meta-analysis, I am comparing the hard and soft tissue outcomes of different placement and loading protocols on single maxillary implants in the esthetic region. In my second metaanalysis, I am investigating the effect of CAD/CAM individual healing abutments vs conventional healing abutments on peri-implant hard and soft tissues in the esthetic zone.

**AGE** 24 years SUPERVISOR(S) Krisztina Mikulás E-MAIL qianxinyi98@gmail.com

### GROUP 3 GYNECOLOGY & UROLOGY



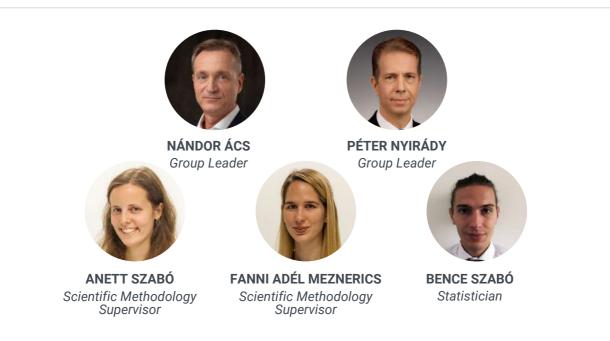


### GROUP 3 GYNECOLOGY & UROLOGY

### **INTRODUCTION TO THE GROUP**

The Gynecology and Urology group has 12 students, 9 students from the field of obstetrics and gynecology, amongst whom 8 are doctors and 1 is a dietitian. The 2 doctors are specialized in urology, and 1 of them is a radiologist. Within the students 3 are already specialists, 2 of them are in their final year as residency, 2 students are full-time PhD students, and the others are in their residency years. Members have a wide range of interests ranging from female genital beautification surgeries, endocrine disorders, biomarkers, and dietary supplementations to interventional radiologic procedures, and many more. The group is planning to complete 16 meta-analyses, 1 network meta-analysis, 1 registry with a meta-analysis, and 4 clinical trials. As additional members of the group, 5 project students are helping the researchers and are also learning the basics of high-quality research through the program. The two SMSs are Fanni Meznerics, who is a PhD student in dermatology, and Anett Szabó, who is a PhD student in urology and a resident doctor. The leaders of the group are Professor Nándor Ács and Professor Péter Nyirády, internationally renowned experts in their fields. Professor Ács's main interests are female genital plastic surgeries, laser treatments for the improvement of sexual life, transvaginal surgeries, and perimenopausal changes and treatments. Professor Nyirády's fields of interest are uro-oncology, robotic- and laparoscopic surgeries.

### MEMBERS OF THE GROUP



**STUDENTS:** Ádám Csirzó, András Kubik, András Mihály Géczi, Benjamin Skribek, Dénes Péter Kovács, Gábor Vleskó, Isabel Amorim Pinto das Virgens, István Madár, Júlia Ács, Márkó Unicsovics, Rita Vajna, Zsófia Tornyossy

**SUPERVISORS:** Attila Majoros, Tibor Szarvas, Ferenc Bánhidy, Szabolcs Várbíró, Márton Keszthelyi, Judit Hethéssy, Levente Sára, Nándor Ács, Pál Ákos Deák, Gábor Szabó, Sándor Valent

### ÁDÁM CSIRZÓ

SEMMELWEIS UNIVERSITY, DEP. OF OBSTETRICS AND GYNECOLOGY





### PROJECT DESCRIPTION

During my college years, I felt that obstetrics and gynecology will be the best specialization for me. After graduation, it wasn't a question, that I want to start my career at Semmelweis Clinics. Now, as a sophomore resident, I started my PhD studies with an interest in endometriosis. The exact scope of my research is "investigating the most effective medical treatments for endometriosis-related pain", which is such an important area of endometriosis illness.

AGE 27 years SUPERVISOR(S) Sándor Valent E-MAIL adamcsirzo@gmail.com

### ANDRÁS KUBIK





#### PROJECT DESCRIPTION

I am dedicated to develop my clinical experience, a thoughtful incorporation of a professional attitude befitting of a calling rather than a job. I have additional teaching and administrative responsibilities including the supervision of medical students and individual research activities. My goal is to lead a balanced life devoted to patient service, professional excellence, personal growth and continued improvement. Part of being a successful urological surgeon is learning to work efficiently with high quality and to communicate professionally to create a career that will lead to accomplishment and satisfaction. This satisfaction will be magnified by learning to balance personal with professional life and to maintain high quality relationships, both personally and professionally.

**AGE** 35 years SUPERVISOR(S) Tibor Szarvas E-MAIL drkubikandras@gmail.com

### ANDRÁS MIHÁLY GÉCZI SEMMELWEIS UNIVERSITY, DEPT. OF OBSTETRICS AND GYNECOLOGY





### PROJECT DESCRIPTION

I am a PhD student at the Department of Obstetrics and Gynecology at Semmelweis University, participating in the Translational Medicine PhD Program. My focus of interest is the female genital beautification concept. I am currently working on a meta-analysis investigating the effect of female genital beautification and rejuvenation on patient-reported outcomes.

AGE 29 years SUPERVISOR(S) Szabolcs Várbíró E-MAIL gandrasmihaly@gmail.com

### BENJAMIN SKRIBEK





#### PROJECT DESCRIPTION

I graduated from Semmelweis University in 2022. I am a first-year PhD student and soon I would like to get a job as a radiologist resident. Later I want to specialize in interventional radiology. My main area of interest is oncoradiology. I try to do as much scientific work as possible on this topic. My main title is 'The significance of Photon Counting CT imaging in living kidney donor nephrectomy'. With this new imaging technique, we would like to simply do the preoperative examination of kidney donor candidates. In the first year of my PhD studies, we would like to focus on interventional radiology topics. Mainly the treatments of adrenocortical, renal, and prostate tumors. We aim to gain a great deal of knowledge about the possibilities of using ablation and embolization techniques.

**AGE** 27 years SUPERVISOR(S) Pál Ákos Deák E-MAIL skribekbenjamin@gmail.com

### DÉNES PÉTER KOVÁCS SEMMELWEIS UNIVERSITY, DEPT. OF OBSTETRICS AND GYNECOLOGY



### PROJECT DESCRIPTION

I'm a second-year resident at the Obstetrics and Gynecology department of Semmelweis University. I am interested in infertility and any effects that might be detrimental to pregnancies. My area of research is Human Papillomavirus infection, and its relation to adverse birth outcomes. As my hobbies I like to read books about interesting stories and watching movies that haven't receive Oscar nominations. Doing sports is a must for me, I love CrossFit and I am constantly looking for new squash partners.

AGE 28 years **SUPERVISOR(S)** Ferenc Bánhidy E-MAIL kovacsdenespeter@gmail.com

**GÁBOR VLESKÓ** SEMMELWEIS UNIVERSITY, DEPT. OF OBSTETRICS AND GYNECOLOGY





### PROJECT DESCRIPTION

I work as a specialist doctor in obstetrics and gynecology at the Department of Obstetrics and Gynecology of Semmelweis University and I am taking part in a PhD fellowship program. I am currently working on a meta-analysis, investigating the efficacy and safety of combined parenteral and oral contraceptives in reproductive aged women.

**AGE** 42 years SUPERVISOR(S) Szabolcs Várbíró E-MAIL vleskogabor@gmail.com

### **ISABEL** PINTO AMORIM DAS VIRGENS

SEMMELWEIS UNIVERSITY, CENTRE FOR TRANSLATIONAL MEDICINE





#### PROJECT DESCRIPTION

I am a first year PhD student from Brazil. I am a registered dietitian and a big research enthusiast. My main research field embraces the effect of the nutritional status on the frequency of adverse outcomes in the pregnant women. My first meta-analysis will investigate the impact of maternal anemia on the frequency of pregnancy outcomes such as spontaneous abortions, IUGR, preterm delivery, and small for gestational age. The second one analyses the impact of maternal anemia on the frequency of congenital abnormalities. My mission is to develop better screening strategies to prevent anemia-related outcomes.

AGE 28 years SUPERVISOR(S) Nándor Ács E-MAIL isabel.amorim17@gmail.com

**ISTVÁN MADÁR** SEMMELWEIS UNIVERSITY, DEPT. OF OBSTETRICS AND GYNECOLOGY





### PROJECT DESCRIPTION

I am an obstetrics and gynecology specialist at the Department of Obstetrics and Gynecology Clinic of Semmelweis University. Currently, my reserch is focused on the proper management of endometrial cancer. Therefore, my first topic is the role of the miRNAs in the management of endometrial cancer.

**AGE** 32 years **SUPERVISOR(S)** Nándor Ács, Gábor Szabó E-MAIL madaristvan22@gmail.com

### JÚLIA ÁCS

SEMMELWEIS UNIVERSITY, DEPARTMENT OF UROLOGY





#### PROJECT DESCRIPTION

I am a first-year PhD student and a resident doctor at Semmelweis University Department of Urology. I am mainly interested in the borderline topics between urology and gynecology, particularly in problems, such as female pelvic organ prolapse (POP). I would like to work on two meta-analyses to collect and evaluate complications of surgical treatments regarding female stress urinary incontinence and urogenital prolapse. My vision is to educate patients about our findings on perioperative risk factors, thus reducing surgical complications. I consider it my mission to identify all possible perioperative risk factors, to adapt the surgical plan to the individual characteristics of the patients, and to improve the complication rate of surgery by reducing risk factors.

AGE 25 years SUPERVISOR(S) Attila Majoros E-MAIL acsjulia97@gmail.com

### MÁRKÓ UNICSOVICS SEMMELWEIS UNIVERSITY, DEPT. OF OBSTETRICS AND GYNECOLOGY





### PROJECT DESCRIPTION

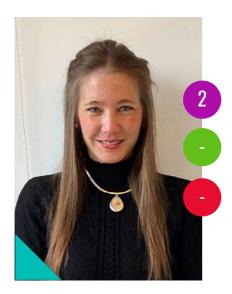
I am senior obstetrician and gynecologist resident at Semmelweis University Clinics. My main interest includes gynecologic oncology, oncosurgery, general gyno surgery and gynecological endocrinology. Therefore, my main research field is gynecological endocrinology, more precisely I study physiological changes in PCOS.

**AGE** 30 years SUPERVISOR(S) Szabolcs Várbíró E-MAIL u.marko92@gmail.com

### **RITA** VAJNA

SEMMELWEIS UNIVERSITY, DEPT. OF OBSTETRICS AND GYNECOLOGY





### PROJECT DESCRIPTION

I am a specialist in obstetrics and gynecology, and I am taking part in the PhD fellowship program. I am working on a systematic review and meta-analysis investigating the effect of letrozole on fertility in women with PCOS.

**AGE** 32 years **SUPERVISOR(S)** Szabolcs Várbíró, Levente Sára E-MAIL rita.zs.vajna@gmail.com

### ZSÓFIA TORNYOSSY







### PROJECT DESCRIPTION

I am a resident doctor in obstetrics and gynecology, and I am taking part in the PhD fellowship program. I am working on a systematic review and meta-analysis examining the effect of oral contraceptives on cancer risk.

**AGE** 29 years **SUPERVISOR(S)** Nándor Ács E-MAIL zsofia.tornyossy@gmail.com

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# GROUP 4 IMMUNOLOGY & COVID

## **INTRODUCTION TO THE GROUP**

The Immunology & COVID-19 group has eight students from a broad spectrum of specialty fields, including dermatology, pharmacy, transplantation, surgery, statistics, sociology, and biotechnology. The members of the group have a wide range of interests, from the treatment of melanoma and psoriasis and the use of natural compounds in medicine to the implementation of deep learning models in COVID-19 severity prediction and the utility of rapid molecular assays for the diagnosis of bloodstream infections in emergency medicine. The two Scientific Methodology Supervisors of the group are Gantsetseg Garmaa, an internal medicine specialist and PhD student at the Central of Translational Medicine, and Fanni Meznerics, a PhD student at the Department of Dermatology. The leaders of the group are Professor Dezső Csupor from the field of pharmacy, Dr. András Bánvölgyi and Dr. Lajos Kemény, both from the field of dermatology.

## **MEMBERS OF THE GROUP**



DEZSŐ CSUPOR Group Leader



GANTSETSEG GARMAA Scientific Methodology Supervisor



LAJOS VINCE KEMÉNY Group Leader



FANNI ADÉL MEZNERICS Scientific Methodology Supervisor



ANDRÁS BÁNVÖLGYI Group Leader



PÉTER FEHÉRVÁRI Statistician

**STUDENTS:** Amir Gharehdaghi, Andrea Tóth-Mészáros, Anna Sára Lengyel, Beáta Kovács, Dorottya Bastidas-Gergő, Gabriella Rapszky, Márton Rakovics, Noémi Ágnes Galajda

SUPERVISORS: Péter Holló, Lajos Vince Kemény, Dezső Csupor, Attila Ványolos, Péter Hegyi, András Bánvölgyi

## AMIR GHAREHDAGHI

SEMMELWEIS UNIVERSITY, CENTRE FOR TRANSLATIONAL MEDICINE





## PROJECT DESCRIPTION

I am Amir Ghare, a pharmacist, and I am a first-year PhD student at the Centre for Translational Medicine. I am mainly interested in complementary medicine. My first project is conducting a metaanalysis on the Investigation of the efficacy of natural products in the treatment and prevention of oral mucositis in cancer patients. I aim to improve the clinical assessment of cancer patients related to oral mucositis by applying natural products. My vision is to improve the life quality and extend the life expectancy of cancer patients with better clinical assessment.

AGE 39 years SUPERVISOR(S) Dezső Csupor E-MAIL amir.gharehdaghi@gmail.com

## ANDREA TÓTH-MÉSZÁROS





### PROJECT DESCRIPTION

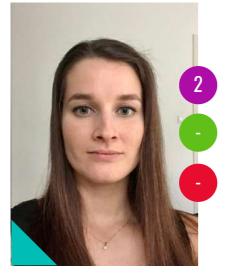
I'm a pharmacist. The main field of my interest in this project is 'the Adaptogens', their mechanism of action, the general adaptation syndrome. My topic at the moment is 'Investigating the effect of adaptogens on the cortisol pathway and on the stress level'.

**AGE** 43 years SUPERVISOR(S) Dezső Csupor E-MAIL a.toth.mesz@icloud.com

## ANNA SÁRA LENGYEL

SEMMELWEIS UNIVERSITY, DEP. OF DERMATOLOGY VENEROLOGY AND DERMATOONCOLOGY





## PROJECT DESCRIPTION

I am a PhD student at the Department of Dermatology, Venerology, and Dermatooncology at Semmelweis University, in the meantime participating in the Translational Medicine PhD Program. My field of interest is dermatooncology, particularly the biology of melanoma. Currently, I am working on an interventional network meta-analysis regarding the combination therapies in the management of melanoma malignum and planning to conduct another meta-analysis about the adjuvant therapy setting of melanomas.

AGE 26 years SUPERVISOR(S) Lajos Kemény E-MAIL annasara.lengyel@gmail.com

## **DOROTTYA BASTIDAS-GERGŐ** SEMMELWEIS UNIVERISTY, DEP. OF PHARMACY





## PROJECT DESCRIPTION

I am a medical biotechnologist and a PhD student at the Department of Pharmacognosy and the Center of Translational Medicine, Semmelweis University. I aim to assess the clinical efficacy and safety of certain essential oil-based phytomedicines to ensure their safe and rational use.

AGE 31 years **SUPERVISOR(S)** Dezső Csupor, Attila Ványolos E-MAIL gergo.dorottya@gmail.com

## **GABRIELLA ANNA RAPSZKY** SEMMELWEIS UNIVERSITY, DEP. OF EMERGENCY MEDICINE





### PROJECT DESCRIPTION

I am a PhD student and clinical doctor at the Department of Emergency Medicine of Semmelweis University, participating in the Translational Medicine PhD Program. I am interested in developing the management of sepsis among patients admitted to the Emergency Department. Early management with adequate antimicrobials and rapid resuscitation to restore and stabilize hemodynamic status is associated with improved outcomes. Currently, I am working on a meta-analysis, which aims to investigate the accuracy of rapid molecular assays performed on whole blood, allowing earlier pathogen identification in patients with bloodstream infection. I am planning to conduct a second meta-analysis concerning the effect of appropriate antibiotic use in septic patients. I aim to increase sepsis awareness and the importance of early treatment to reduce mortality rates.

**AGE** 25 years SUPERVISOR(S) Bánk Fenyves E-MAIL rapszkygabi@gmail.com

## MÁRTON RAKOVICS LORÁND EÖTVÖS UNIVERSITY (ELTE)





### PROJECT DESCRIPTION

I am a PhD student at the Central of Translational Medicine of Semmelweis University, and a lecturer at ELTE, Faculty of Social Sciences, Department of Statistics. My professional interests are data science, statistical learning, Deep Learning, and Natural Language Processing in particular. In my PhD research, I'm working on the application of Artificial Intelligence (Deep Learning) in COVID-19 severity prediction.

**AGE** 36 years SUPERVISOR(S) Andrea Harnos E-MAIL rakovicsmarci@gmail.com

## **NOÉMI ÁGNES GALAJDA** NAME OF THE CURRENT WORKPLACE





## PROJECT DESCRIPTION

I am a PhD student at the Department of Dermatology, Venerology, and Dermatooncology of Semmelweis University, participating in the Translational Medicine PhD Program. My broader field of interest is the pathomechanism of psoriasis, in particular the investigation of pathomechanical relationship between this autoimmune disease and its comorbidities.

**AGE** 25 years **SUPERVISOR(S)** Péter Holló, András Bánvölgyi E-MAIL noemigalajda@gmail.com

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# GROUP 5 ENDOCRINOLOGY







## **INTRODUCTION TO THE GROUP**

The Endocrinology Group is a small group of students with diverse backgrounds. The group consists of a biologist, a gynecologist, and an MD-PhD student. Along with the PhD students, there are three Scientific Methodology Learners, and three supervisors working with the team. Main areas of interest include infertility treatment, hormonal and non-hormonal treatment of vulvovaginal atrophy, and diagnostic accuracy of non-invasive prenatal testing. The group leader is Szabolcs Várbíró, who is an expert in the gynecological endocrine field.

## **MEMBERS OF THE GROUP**



SZABOLCS VÁRBÍRÓ Group Leader



CANER TURAN Scientific Methodology Supervisor



BENCE SZABÓ Statistician

STUDENTS: Lotti Lúcia Lőczi, Máté Éliás, Márton Kónya

SUPERVISORS: Szabolcs Várbíró, Márton Keszthelyi, Miklós Sípos, Anikó Gaál

## **LOTTI LÚCIA LŐCZI** SEMMELWEIS UNIVERSITY, FACULTY OF MEDICINE



## PROJECT DESCRIPTION

I am a sixth-year medical student at Semmelweis University. In addition to completing the last year of medical school, I started the PhD program. I am currently working on a meta-analysis, investigating the effectiveness and safety of IUDs in emergency contraception.

**AGE** 24 years **SUPERVISOR(S)** Szabolcs Várbíró, Márton Keszthelyi E-MAIL loczilotti13@gmail.com

## MÁRTON KÓNYA PREVENTREND KFT.





## PROJECT DESCRIPTION

I'm biologist, I graduated at Pecs in 1998. Now I work Czeizel Institute, my main job position is in laboratory to work in prenatal genetic screenings and diagnostics. We do biochemical screenings, combining with ultrasound results, we do NIPT and invasive diagnostics from chorionic villi and amniotic fluid.

**AGE** 49 years **SUPERVISOR(S)** Anikó Gál E-MAIL konya.marton@czeizelintezet.hu

## MÁTÉ ÉLIÁS

SZENT BORBÁLA HOSPITAL, DEP. OF GYNECOLOGY





### PROJECT DESCRIPTION

I am a PhD student and clinical doctor at the Department of Emergency Medicine of Semmelweis University, participating in the Translational Medicine PhD Program. I am interested in developing the management of sepsis among patients admitted to the Emergency Department. Early management with adequate antimicrobials and rapid resuscitation to restore and stabilize hemodynamic status is associated with improved outcomes. Currently, I am working on a meta-analysis, which aims to investigate the accuracy of rapid molecular assays performed on whole blood, allowing earlier pathogen identification in patients with bloodstream infection. I am planning to conduct a second meta-analysis concerning the effect of appropriate antibiotic use in septic patients. I aim to increase sepsis awareness and the importance of early treatment to reduce mortality rates.

AGE 28 years **SUPERVISOR(S)** Szabolcs Várbíró, Miklós Sípos E-MAIL kretschmer47@gmail.hu

# GROUP 6 **PEDIATRICS**



### **INTRODUCTION TO THE GROUP**

There are 11 PhD students in the pediatric group with a great variety of scientific interests and research areas. Most students work as pediatric residents at the university clinics or at Heim Pál National Pediatric Institute. The group also has students working at Veszprém County Hospital and at the Military Hospital-State Health Centre. However, there are students coming from different areas and scientific backgrounds such as pharmacology, biotechnology, and conductive education, which shows the great diversity this group has. The main research topics include neonatology, oncology, IBD, conductive education, and pharmacology. First meta-analyses have been conducted and further studies, mainly registry analyses and randomized controlled trials are planned to be performed. The group leaders are Andrea Párniczky and Miklós Garami whose vast experience and deep insight are inevitable for the success of the projects.

## MEMBERS OF THE GROUP





MIKLÓS GARAMI Group Leader



VANDA MÁTÉ Scientific Methodology Supervisor



MÁRK HERNÁDFŐI Scientific Methodology Supervisor



DÁNIEL VERES Statistician

**STUDENTS:** Ádám Szilágyi, Ágnes Tímár, Erika Kolumban, Gréta Major, Janka Kovács, Kinga Anna Budai, Márton Szabados, Nicole Li, Petra Varga, Renáta Mária Kiss-Miki, Vivien Unger, Zsuzsanna Nagy

**SUPERVISORS:** Csaba Lódi, Balázs Hankó, Miklós Garami, Andrea Párniczky, Ákos Gasparics, Miklós Szabó, Katalin Müller, Péter Gaál, Ibolya Turi, Péter Varga, Eszter Tuboly



## ÁDÁM SZILÁGYI

SEMMELWEIS UNIVERSITY, CENTRE FOR TRANSLATIONAL MEDICINE





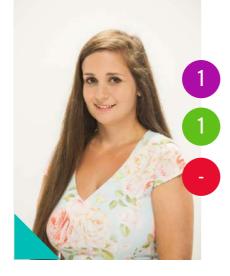
### PROJECT DESCRIPTION

I am a biologist, studying as a PhD student at the Centre for Medicine, Semmelweis University, Translational by the supervisiorship of Miklós Garami, from the 2nd Department of Pediatrics. I am interested in oncological therapeutics, especially in novel, adoptive immunotherapies. In my actual research, I would like to show the big picture of out current knowledge about a novel therapeutic option's (CAR T cells) utility in clinical level. My first topic is the comparison of efficacy and toxicity of CAR T-cell versus conventional therapy in hemato-oncology - a systematic review and meta-analysis. In this work our aim is to identify the oncological patient groups benefiting the most from CAR T-cell therapy with the least side-effects. As a scientist, I would like to continue my work in the field of cancer therapeutics and provide innovative solutions for oncology in the future.

AGE 25 years SUPERVISOR(S) Miklós Garami E-MAIL sziladam97@gmail.com

## **ÁGNES ESZTER TÍMÁR** HEIM PÁL NATIONAL PEDIATRIC INSITUTE





### PROJECT DESCRIPTION

I am a newly graduated pediatric resident at Heim Pál National Pediatric Institute and my main field of interest is pediatric gastroenterology. My first project is a systematic review and metaanalysis regarding the frequency of extraintestinal manifestations in inflammatory bowel disease patients on different second-generation drugs. Our aim is to determine which second- generation drug is associated with the lowest frequency of new extraintestinal manifestations. My second project is a registry analysis about the extraintestinal manifestations in pediatric inflammatory bowel disease. It is a nationwide survey based on the Hungarian Pediatric IBD Registry. The aim of this multicenter, retrospective cohort study is to assess the frequency of extraintestinal manifestations among Hungarian children based on HUPIR.

**AGE** 27 years **SUPERVISOR(S)** Katalin Müller E-MAIL timar.agnes95@gmail.com



## ERIKA KOLUMBÁN SEMMELWEIS UNIVERSITY, ANDRÁS PETŐ FACULTY





### PROJECT DESCRIPTION

My name is Erika Kolumbán, I am a conductor-teacher and lecturer at the Pető András Faculty of Semmelweis University. I joined the Translational Medicine program in 2022, with a field of interest in conductive education. My first project is a meta-analysis investigating the effect of additional respiratory therapies on pulmonary function in patients with cerebral palsy, thus contributing to the improvement of overall survival and quality of life in patients with cerebral palsy. My second project is a clinical trial, analyzing the effects of conductive breathing exercises on pulmonary function, muscle tone, and quality of life in school-age children with cerebral palsy. The results will be important for the development of a new protocol for conductive breathing exercises to prevent respiratory diseases.

**AGE** 46 years **SUPERVISOR(S)** Péter Gaál, Ibolya Turi E-MAIL kolumbanerika@gmail.com

## **GRÉTA SZILVIA MAJOR** HEIM PÁL NATIONAL PEDIATRIC INSITUTE





#### PROJECT DESCRIPTION

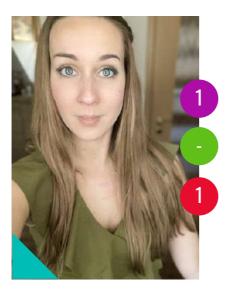
I am a newly graduated, pediatric resident at Heim Pál National Pediatric Institute. My main area of interest is neonatology. As my first project, I am working on a systematic review and meta-analysis investigating the outcomes of neonatal resuscitation with and without intact umbilical cord. According to the guidelines and professional literature for those preterm and term infants who require resuscitation at birth, there is insufficient evidence to recommend cord clamping before or after the start of resuscitation. As a second project, I intend to conduct a systematic review and meta-analysis to compare the clinical effectiveness and side effects of different maintenance doses of caffeine therapy in preterm infants to determine the optimal dose.

**AGE** 25 years **SUPERVISOR(S)** Ákos Gasparics E-MAIL major.greta9@gmail.com

## JANKA KOVÁCS

SEMMELWEIS UNIVERSITY, FACULTY OF MEDICINE, 2ND DEPARTMENT OF PEDIATRICS





### PROJECT DESCRIPTION

I am a fourth-year resident doctor in pediatrics at the 2nd Department of Pediatrics, Semmelweis University and I am taking part in the PhD fellowship program. I am working on a systematic review and meta-analysis examining the incidence of bacterial ventriculoperitoneal shunt infection with and without antibiotic prophylaxis. My second project will be a prospective study at Semmelweis University 2nd Department of Pediatrics, which aims to predict the optimal dose of targeted therapy ( based on Next Generation Sequencing) in children with brain cancer.

AGE 28 years **SUPERVISOR(S)** Miklós Garami E-MAIL janka.kovacs1121@gmail.com

## KINGA ANNA BUDAI

SEMMELWEIS UNIVERSITY, UNIVERSITY PHARMACY, INSTITUTE OF PHARMACEUTICAL ORGANISATION





I am a clinical hospital pharmacist at the University Pharmacy Department of Pharmacy Administration at Semmelweis University. My first project will be a meta-analysis of the efficacy and safety of extended or continuous infusion versus short-term infusion of betalactam antibiotics in pediatric patients. My second project will be to study the plasma concentration of antimicrobial agents during continuous renal replacement therapy in children and evaluate the influencing factors, and so to develop the appropriate dosing adjustment.

**AGE** 30 years **SUPERVISOR(S)** Csaba Lódi, Balázs Hankó E-MAIL budai.kinga@pharma.semmelweis-univ.hu

## MÁRTON SZABADOS

SEMMELWEIS UNIVERSITY, FACULTY OF MEDICINE, 2ND DEPARTMENT OF PEDIATRICS





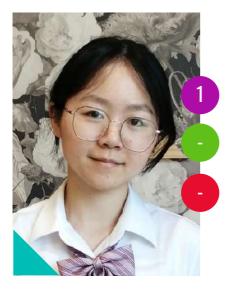
### PROJECT DESCRIPTION

I am a 1st year PhD student in the Centre for Translational Medicine, and a 3rd year resident in the 2nd Department of Pediatrics, Semmelweis University. My main interest is in pediatric oncology and oncopsychology. One of my main topics is focusing on the changes of the mental health through pediatric cancer experience. Cancer treatments have several adverse effects, and one, that can occur in short and long term also, are the neurocognitive and psychiatric deficits. We are performing a systematic review with a meta-analysis in this topic. My future plan is to establish a wellmanaged follow-up system for the mental health of the pediatric cancer survivors.

AGE 26 years **SUPERVISOR(S)** Miklós Garami E-MAIL marton.szabados965@gmail.com

**NICOLE LI** SEMMELWEIS UNIVERSITY, CENTRE FOR TRANSLATIONAL MEDICINE





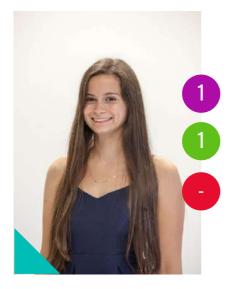
## PROJECT DESCRIPTION

My name is Li Ximeng (Nicole). I am a first-year PhD student at the Centre for Translational Medicine, Pediatrics group. I studied Biological Sciences at Zhejiang Chinese Medical University. I have done some student research on non-small cell lung cancer in the past, looking at active ingredients within herbs that affect relevant pathways to inhibit proliferation and induce apoptosis in A549 cells. I started the CTM training in the pediatric group, where I joined a project concerning the use of CAR-T cell therapies in pediatric and adult oncology. We are investigating the efficacy and side effect spectrum of these treatments.

AGE 20 years SUPERVISOR(S) Miklós Garami E-MAIL liximeng0123@gmail.com

## PETRA VARGA HEIM PÁL NATIONAL PEDIATRIC INSITUTE





### PROJECT DESCRIPTION

I have graduated in 2022 at University of Szeged as a medical doctor, currently I have a position at the Heim Pál National Pediatric Institute. My main interest is pediatrics, more specifically pediatric oncology, and hematology, and biobanking. My first topic is a systematic review and meta-analysis on the prognostic accuracy of different prediction models in childhood cancer. I would like to compare how precise are the conventional clinical systems and the ones based on data from biobanks: the next-generation sequencing based scores and the artificial intelligence based models. Prognostic accuracy is crucial for improving precision therapies and thus, survival. My second topic will be about chimeric antigen receptor T-cell therapies. This modern approach yields great results; however, this toxicity of the treatment is still high. My aim is to explore the molecular pathways behind the occurrence of toxicity in the T-cells.

AGE 24 years **SUPERVISOR(S)** Eszter Tuboly, Andrea Párniczky E-MAIL vpetra9998@gmail.com

## **RENÁTA MÁRIA KISS-MIKI** zala county szent rafael hospital





## PROJECT DESCRIPTION

My name is Renáta Kiss-Miki, I am a second-year resident, and my field of interest is pediatric neurology and pediatric neuro-oncology. My current research plan is a meta-analysis comparing the two major types of radiotherapy, investigating their effectiveness and side effect profiles. In this way, I would like to define which is the best radiation therapy for children with brain tumors. Also, I would like to analyze the different neurological sequels after oncological therapies in the neurooncology workgroup led by Professor Miklós Garami, my supervisor at the 2nd Department of Pediatrics. I would also like to work with music therapy, to demonstrate through clinical research the pain-reducing and mood-increasing effects of this painless therapy method. I aim to help clinicians with my research topics and to give a better quality of life for little survivors, who are fighting brain tumors.

AGE 27 years SUPERVISOR(S) Miklós Garami **E-MAIL** drkissmikirenata@gmail.com

## VIVIEN UNGER

NAME OF THE CURRENT WORKPLACE





#### PROJECT DESCRIPTION

I am working as a fourth-year pediatric resident at the Csolnoky Ferenc Hospital in Veszprém and this year I am also participating in the PhD program. My field of interest is neonatology. Currently, I am working on a meta-analysis and a systematic review, which focuses on the optimal mode of delivery among very preterm infants (born before the 32nd gestational week). For term, cephalic neonates' vaginal birth is the preferred method for childbirth. Despite this, among very preterm infants, the optimal mode of delivery is still controversial. With my group, I aim to provide information about the optimal mode of delivery to decrease mortality and morbidity. The second project mine will be a registry analysis investigating the outcomes and the role of perinatal factors of infants born at the threshold of viability in Hungary.

AGE 27 years **SUPERVISOR(S)** Ákos Gasparics, Péter Varga E-MAIL ungervivien@gmail.com

## **ZSUZSANNA NAGY** SEMMELWEIS UNIVERSITY, DEPT. OF OBSTETRICS AND GYNECOLOGY





## PROJECT DESCRIPTION

Investigating the time and risk factors for IVH in preterm neonates my field of interests are the preterm neonates with intraventricular hemorrhage (IVH). IVH is a frequent complication of prematurity with a pooled estimates of 34.3% for GA < 28 weeks and associated with adverse neurodevelopmental outcome and mortality. In clinical setting the exact onset of IVH is unknown, most of the cases IVH occur within the first three days of life. There are several perinatal and postnatal risk factors known to increase IVH. Temporality between IVH and its antecedents is lacking. Risk factors for IVH varies by timing of bleed. I aim to predict the onset of IVH, identify their antecedence, apply preventive measurements, and implement interventions (Physiological-based cord clamping at delivery room stabilization). Our candidate risk factor can be neonatal low systemic blood flow at birth, chorioamnionitis.

**AGE** 42 years SUPERVISOR(S) Miklós Szabó E-MAIL zsuzsanagydr@gmail.com

# GROUP 7 GASTROENTEROLOGY

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## GROUP 7 GASTROENTEROLOGY

## **INTRODUCTION TO THE GROUP**

The Gastroenterology group has 17 PhD students: 10 resident doctors in the field of gastroenterology and pancreatology, 3 full-time PhD researchers, 3 specialists (2 in gastroenterology and 1 in radiology), and 1 biologist. The three Scientific Methodology Supervisors (SMSs) are Mahmoud Obeidat, Anett Rancz, and Eszter Szalai. The leaders of the group are Professor Péter Hegyi and Doctor Bálint Erőss. The main interest of Professor Péter Hegyi is pancreatology, more specifically acute pancreatitis. While Bálint Erőss, is focused on gastroenterology specifically targeting gastrointestinal bleeding. Other Supervisors in this group are specialists in the fields of surgery, hepatology, and Inflammatory Bowel Disease (IBD). The members have various interests, such as acute and chronic pancreatitis, malnutrition, cough severity, radiology aspects in splanchnic venous thrombosis, gastrointestinal bleeding and cancer, IBD, and chronic liver disease. The group is planning to complete 28 meta-analyses, 4 registry analyses, 1 network meta-analysis, and 1 clinical trial.

## **MEMBERS OF THE GROUP**



**STUDENTS:** Bálint Gellért, Bettina Budai, Cai Gefu, Dániel Bednárik, Diana Elena lov, Dorottya Tarján, Edina Tari, Endre-Botond Gagyi, Hajnal Székely, Jakub Hoferica, Laura Tóth, Mónika Bernadett Lipp, Paraskevopoulos Panagiotis, Petrana Martinekova, Ruben Zsolt Borbély, Sarolta Beáta Kávási, Mihaela Topola

**SUPERVISORS:** Péter Hegyi, Nándor Faluhelyi, Bálint Erőss, Pál Miheller, István Hritz, László Nagy, Lászlóné Földvári-Nagy, Katalin Lenti, Drug Vasile Liviu, Szabolcs Ábrahám

**BÁLINT GELLÉRT** SEMMELWEIS UNIVERSITY, DEP. OF SURGERY, TRANSPLANTATION AND GASTROENTEROLOGY



## PROJECT DESCRIPTION

I started my studies at the Central of Translational Medicine with the aim to widen my perspective and gather experience about medical research. My field of interest is GI endoscopy and its role in the diagnosis and treatment of pancreatobiliary diseases.

AGE 33 years SUPERVISOR(S) István Hritz E-MAIL gellert.balint89@gmail.com

## **BETTINA** BUDAI

SEMMELWEIS UNIVERSITY, HEART AND VASCULAR CENTRE, CENTRE OF PANCREATIC DISEASES





## PROJECT DESCRIPTION

I am a first year PhD student and currently I am working as a dietician at Semmelweis University, Department of Pancreatic Diseases. I am interested in medical nutritional therapy and in dietetics intervention for patients suffering from different type of cancer. I applied for this PhD program to deepen my knowledge about research methodology.

**AGE** 26 years **SUPERVISOR(S)** Péter Hegyi, Stefania Bunduc E-MAIL budai.betti4@gmail.com

## CAI GEFU NAME OF THE CURRENT WORKPLACE





### PROJECT DESCRIPTION

I'm a 1st-year full-time PhD student in the Centre for Translational Medicine of Semmelweis University. I am from China. My previous study field was lung disease and my topic was the effectiveness of FGF10 on pulmonary fibrosis. I published an original research in Q2 journal named FGF10 Therapeutic Administration Promotes Mobilization of Injury-Activated Alveolar Progenitors in a Mouse Fibrosis Model. Now I am interested in GI cancer so I intend to do a meta-analysis of this field. With this project, I would like to investigate effective interventions to improve the life quality of patients.

**AGE** 25 years SUPERVISOR(S) Péter Hegyi **E-MAIL** lajirenbushao@gmail.com

## DÁNIEL BEDNÁRIK HEIM PÁL NATIONAL PEDIATRIC INSITUTE





### PROJECT DESCRIPTION

I graduated in 2020 at University of Szeged as a medical doctor. In September of the same year, I started my residency at Heim Pál National Pediatric Institute, as a pediatrician, meanwhile I am also working on my PhD with a special interest in infectiology and gastroenterology. My main research field is related to Clostridium difficile infection.

**AGE** 28 years SUPERVISOR(S) E-MAIL László Földvári, Katalin Földváriné Lentidaniel.bednarik@yahoo.com

## **DIANA-ELENA** IOV

SAINT SPIRIDON EMERGENCY HOSPITAL IASI, ROMANIA





## PROJECT DESCRIPTION

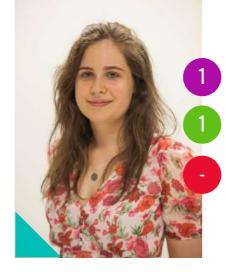
I am a second-year resident doctor training in Gastroenterology and Hepatology from lasi, Romania. I am a PhD student with a focus on neurogastroenterology, especially gastroesophageal reflux disorder with atypical manifestations. However, I am open to all areas of research, and I am always looking for ways to expand my knowledge.

AGE 27 years **SUPERVISOR(S)** Bálint Erőss, Vasile Liviu E-MAIL iovdiana95@gmail.com

## **Dorottya** tarján

SEMMELWEIS UNIVERSITY, HEART AND VASCULAR CENTRE, CENTRE OF PANCREATIC DISEASES





## PROJECT DESCRIPTION

I am a second-year gastroenterology resident at the Division of Pancreatic Diseases, at Semmelweis University. My first project is a meta-analysis identifying early predictors for infected necrosis in acute pancreatitis. My second project is a register analysis.

**AGE** 26 years **SUPERVISOR(S)** Péter Hegyi, Alexandra Mikó **E-MAIL** dori.tarjan@gmail.com

## EDINA TARI

SEMMELWEIS UNIVERSITY, IS DEP. OF HEART AND VASCULAR CENTRE





## PROJECT DESCRIPTION

My name is Edina Tari, and I graduated frm the University of Pécs in 2016. I am a first year PhD student, and also a first yea gastroenterology resident at the Division of Pancreatic Diseases. My main topics of interest are Gastrointestinal Bleeding and Pancreatology. My first project this year is to investigate the influence of papilla morphology on ERCP outcomes.

AGE 25 years SUPERVISOR(S) Bálint Erőss E-MAIL edina.tari@gmail.com

## **ENDRE-BOTOND GAGYI** SEMMELWEIS UNIVERSITY, CENTRE FOR TRANSLATIONAL MEDICINE



## PROJECT DESCRIPTION

I am participating in a clinical Ph.D. fellowship program with mainly interested in gastroenterology and surgical fields. I am currently working on a systematic review and meta-analysis, assessing the incidence of recurrent acute pancreatitis and chronic pancreatitis after an acute pancreatitis episode. The results could help in the early recognition of chronic pancreatitis, which can lead to the slow destruction of pancreatic tissue and cause pancreatic insufficiency. I am also working on a second meta-analysis investigating all risk factors that potentially contribute to the progression of acute pancreatitis into recurrent acute and chronic pancreatitis. My goal is to reduce the recurrence and progression rates of acute pancreatitis. The additional goal is to conduct a registry analysis from the Gastrointestinal Bleeding Registry, in which I actively assure the data quality.

AGE 26 years SUPERVISOR(S) Bálint Erőss E-MAIL endre.gg@gmail.com

## HAJNAL SZÉKELY

SEMMELWEIS UNIVERSITY, DEP. OF SURGERY, TRANSPLANTATION AND GASTROENTEROLOGY





## PROJECT DESCRIPTION

I graduated at University of Medicine and Pharmacy of Târgu Mureş, Faculty of Medicine. For years I worked at Semmelweis University, 2nd. Department of Internal Medicine; since 2020 I'm employed at Semmelweis University, Department of Surgery, Transplantation and Gastroenterology. I specialize in Gastroenterology and Internal Medicine. I much prefer to perform diagnostical endoscopical examinations and interventions, respectively. I'm also involved in the theoretical education and practical training of Hungarian and English-speaking medical students. With Pál Miheller as my supervisor and Anett Rancz as my scientific methodology supervisor, I just started my PhD training.

AGE 47 years SUPERVISOR(S) Pál Miheller **E-MAIL** szhajni75@yahoo.com

## JAKUB HOFERICA





### PROJECT DESCRIPTION

I am a 2020 graduate of Jesse Medical Faculty in Martin, Slovakia. I started my residency at the university hospital in Martin at the internal and gastroenterological department in the same year. My focus is gastroenterology, specifically liver and pancreas diseases. In 2022, I started my PhD program at the Translation Medical Center, Semmelweis University. My main research aim is to explore the relationship between chronic liver diseases and acute pancreatitis.

**AGE** 28 years **SUPERVISOR(S)** Péter Jenő Hegyi, Peter Banovnic E-MAIL hoferica.jakub@gmail.com

## LAURA TÓTH





#### PROJECT DESCRIPTION

I graduated from Semmelweis University, Faculty of Medicine in 2020. As a medical student, I made some voluntary work at Dr. Manninger Jenő National Traumatology Institute and got educational experience at Semmelweis University, Anesthesiology, and Intensive Care Clinic. My thesis was about the comparison of surgical treatment methods for pediatric distal forearm fractures. From 2020, I worked at the Department of Surgery of the Military Hospital, Hungarian Defense Forces as a resident doctor. Now, I started my research as a PhD student of the Centre for Translational Medicine with a topic about the IBD surgery. My supervisor is Pál Miheller from the Inflammatory Bowel Disease Centre of Semmelweis University, Department of Surgery, Transplantatuion and Gastroenterology. My scientific methodology supervisor is Anett Rancz.

AGE 26 years **SUPERVISOR(S)** Pál Miheller E-MAIL laura.toth.0504@gmail.com

## MÓNIKA BERNADETT LIPP

SEMMELWEIS UNIVERSITY, HEART AND VASCULAR CENTRE, CENTRE OF PANCREATIC DISEASES





## PROJECT DESCRIPTION

I am a gastroenterology resident at the Division for Pancreatic Diseases. My SMS is Eszter Szalai and my supervisors are Alexandra Mikó and Péter Hegyi. My main research field of interest regards the management of acute pancreatitis and pancreatic fat content.

**AGE** 29 years **SUPERVISOR(S)** Péter Hegyi, Alexandra Mikó E-MAIL lipp.monika@gmail.com

## **PARASKEVOPOULOS** PANAGIOTIS

SEMMELWEIS UNIVERSITY, CENTRE FOR TRANSLATIONAL MEDICINE





#### PROJECT DESCRIPTION

I am working on two meta-analyses, the first project is about the additional antegrade stenting with hepaticogastrostomy for patients with malignant biliary obstruction. My second project is investigating the hemodynamic and volumetric changes in predicting variceal bleeding. Through my projects, my aspiration is to come up with ideas that can eventually be implemented clinically or tested experimentally to enhance and improve patients' palliation and prophylaxis of any disease or malignancy. For this purpose, it's important to be aware of the direction the different fields of nonpharmacological medical interventions are taking as well as try to rethink interventional approaches by understanding the underlying pathophysiology and individual problems of each disease or malignancy.

AGE 26 years SUPERVISOR(S) Bálint Erőss E-MAIL panag.parask@gmail.com

## PETRANA MARTINEKOVA





#### PROJECT DESCRIPTION

My main topics of interest are hepatology, infectious diseases, and nutrition. I am strongly influenced by my experience abroad (Erasmus Spain, IMFSA Ecuador, Erasmus postgraduate Italy). I would love to combine my passions in Medicine, with research and future clinical practice to help both clinicians and patients to feel safe. Currently, I work as medical tutor for EDU Degree smarter which allows me to stay updated with medical knowledge and I am glad to be able to learn by teaching others. My main research field of interest is hepatology, specifically progression of chronic liver diseases and the strategies which could be implemented to prevent the end-stage liver disease and its complications. In our first metaanalysis and systematic review we aim to assess the current evidence on the efficacy of Vitamin D supplementation in adult patient with chronic liver diseases.

AGE 29 years SUPERVISOR(S) Krisztina Hagymási E-MAIL petrana.martinek@gmail.com

## **RUBEN ZSOLT BORBÉLY** BAICSY-ZSILINSZKY HOSPITAL AND CLINIC





### PROJECT DESCRIPTION

I am a third-year radiology resident doctor at Bajcsy-Zsilinszky Hospital and Clinic in Budapest, Hungary. My interest in gastrointestinal radiology is based on my early successes during residency training when I have been exposed to a wide range of internal medicine pathologies. I prefer CT and MRI of the radiological modalities; however, I have extensive experience in transabdominal ultrasound diagnostics too. My work at the TMC PhD program focuses on the role of CT imaging in acute pancreatitis severity prediction. My first project is a systematic review and meta-analysis, the subject of the study is the prevalence of splanchnic venous thrombosis in the early phase of acute pancreatitis in the literature. The second project is an analysis of the Hungarian Acute Pancreatitis Registry, I will be looking into the relationship between CT-calculated body composition metrics and acute pancreatitis severity and outcomes.

AGE 28 years **SUPERVISOR(S)** Nándor Faluhelyi, Péter Hegyi

E-MAIL drborbelyruben@gmail.com

## SAROLTA BEÁTA KÁVÁSI





### PROJECT DESCRIPTION

I finished medical school in 2018 and have been working as a surgery resident since the beginning of 2019 at the Toldy Ferenc Hospital (Cegléd). I am mainly interested in colorectal diseases with a focus on operating techniques and surgical outcomes. My first project is a Systematic Review and Meta-Analysis on different types of anastomosis after total mesorectal excision. Since most patients following low rectal resection have an impaired quality of life, my aim with this study is to find which type of anastomosis offers the best results after surgery in term of safety and QoL.

AGE 29 years SUPERVISOR(S) Szabolcs Ábrahám, Péter Hegyi

E-MAIL kavasisarolta@yahoo.com

## MIHAELA TOPALA

CENTRAL MILITARY EMERGENCY HOSPITAL "DR. CAROL DAVILA", BUCHAREST





## PROJECT DESCRIPTION

Fifth year gastroenterology resident working in Bucharest, Romania. Second year PhD student at "Carol Davila" University of Medicine and Pharmacy, Bucharest. Translational Medicine 1-year Program between Romania and Hungary.

AGE 30 years **SUPERVISOR(S)** Szabolcs Ábrahám, Victor Costan E-MAIL topala.mihaela@gmail.com

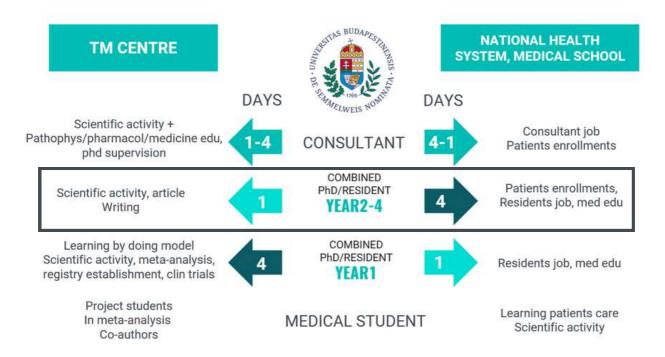


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## **YEAR II.** All you need to know about it

In Year II, PhD students will have a minimum of one day per week to continue their research and prepare for the Complex Exam. The 2nd year's aim is to acquire advanced methodological knowledge, finish the projects for the thesis, and for those being an SMS to learn the teaching by doing methodology.

Below you can find a summary of the most important organization questions. On the other hand, more details can be found further in the summary.



DUTIES	RULE
Group meetings	Once per month, compulsory to attend
Progress reports	Twice per year, compulsory to attend
Project meetings	At least once per month
Class meetings	No compulsory class meetings
Lectures	Highly suggested to attend
Social events	Warmly welcomed to attend

#### **GENERAL RULES**

- · everyone is expected to submit the first paper until the 5th progress report
- everyone is expected to present their achievements at the progress report
- everyone is expected to complete the statistical analysis of their project No.2 until the 5th progress report
- the second article has to be finished by the 6th progress report

#### **GROUP MEETING**

Year II PhD students will have one meeting per month. Attendance is mandatory for everyone. There will be three group meetings before the next progress report and five before the complex exam. This year, the SMAs and SMEs, who are highly experienced scientific methodology consultants, will lead group meetings. The group meetings will aim to present the progress during the last month and a plan for the next month. In addition, new projects should be discussed during the meeting.

#### **PROJECTS MEETINGS and METHODOLOGY SUPERVISION**

In the second year, we will focus more on the individual work of the project teams. Therefore, we will decrease the number of project meetings to 1/month. For methodological help, we also developed a "tutorial" section in Moodle, which is continuously developed.

One meeting per month with the supervisors is mandatory! The number of project meetings may increase in the phase of article writing.



- everyone is expected to submit the first paper until the 5<sup>th</sup> progress report
- everyone is expected to complete the statistical analysis of their project No 2 until the 5<sup>th</sup> progress report
- everyone is expected to present the achievements at the progress report.
- The second article has to be finished by the 6<sup>th</sup> progress report
- Complex exam

#### **STATISTICS**

During Year II, project teams will benefit from the same statistical staff. To ease the work of the statisticians, we ask every workgroup to have a timeline for each project. Therefore, time management is even more important this year.

#### LECTURES

We continuously invite highly recognized scientists in their research fields during the training. In addition, lectures are organized for everyone participating in the TM PhD training.

#### MOODLE

As a major improvement, we have built an e-learning platform that covers all the needs of the PhD training. Moodle serves as a platform for e-learning, group meetings, project meetings, project follow-up, and communication. For communication, we will have separate forums for group meetings, project meetings, classes, and a general forum. On the other hand, communication with other colleagues should be done using the chat function.

#### Website: elearning.tm-centre.org/edu

#### **PROGRESS REPORT**

There will be two progress reports during Year II of the TM PhD training. Attendance is mandatory. The structure of the progress report will be the same as in Year I. Everyone is expected to participate in the 3-month PR of the first year of the 2022/2023 academic year.

#### Dates: December 16-18, 2022

The 24-months PR is equal to the Complex Exam.

#### **COMPLEX EXAM**

Between June 26-29, 2023, we will organize the Complex Exam. The exam will have two parts, (1) the first one will be a written test with questions from the e-learnings and courses, (2) the second will be an oral presentation of your two-year work, 10 minutes presentation followed by 10-20 minutes of discussion. Students who already have their complex exam will also have to complete this exam as a progress report.

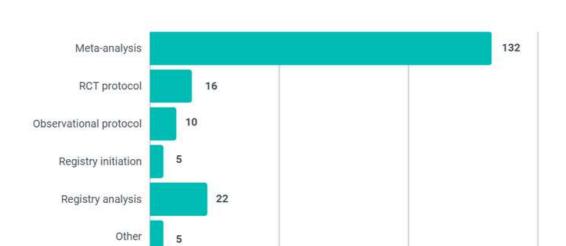
#### **COURSES AND CREDITS**

There are no compulsory courses that students have to attend. However, the schedule for Year I is freely available. Year II students should feel free to attend if any of the courses if they lack any methodology knowledge. The courses have to parts, an e-learning is followed by an in-person course which start at 8 am and last 6 hours.

To attend the Complex Exam, PhD students must acquire **16 Credits until the end of the 4th semester**. Every doctoral school accept all our courses.

#### SOCIAL EVENTS

The CTM is open to provide the platform for organizing any socal events. Networking is one of our keywords. Therefore, everyone is welcomed to participate in our social events. During the year, we will have three enjoyable social nights: one during the Halloween period, one in February, and one at the beginning of the summer.



Altogether there are more than **190 project** in Year II. Most of them are meta-analysis, however, the number of prospective data collections in continously increasing.

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## **ACADEMIC CALENDAR OF 2ND YEAR STUDENTS**



FIND THE CALENDAR ONLINE BY SCANNING THE QR CODE OR CLICKING ON IT

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## **ACADEMIC CALENDAR OF 2ND YEAR STUDENTS**

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# GROUP 1 MISCELLANEOUS



## **INTRODUCTION TO THE GROUP**

The miscellaneous group includes seven students and is characterized by a wide range of approached research topics. The group members come from various fields – including – pharmacology, rheumatology, dermatology, otolaryngology, and pathophysiology. In smaller teams, they have already started working on a total of 13 meta-analyses, three clinical trial protocols, one survey, and the development of an analytical method for therapeutic drug monitoring. The group leader is Dezső Csupor, who has a PhD in pharmaceutics and vast experience in research. He is now a pharmacology professor at University of Pécs and his research area is phytochemistry, analytics of plant-based products, and phytotherapy. The scientific method supervisors of this group are Marie Engh and Rita Nagy, both of them have a medical degree. Marie is one of the meta-analysis group coordinators of the Centre Translational Medicine and a 2nd-year PhD student in the TM PhD training. Marie is interested in gastroenterology, and her topic is mainly related to pancreatitis and pancreatic cancer, while Rita's interest is in pediatrics. She is also a resident doctor at Heim Pál National Pediatric Institute.

## **MEMBERS OF THE GROUP**



**DEZSŐ CSUPOR** Group Leader



**RITA NAGY** Scientific Methodology Supervisor



MARIE ANNE ENGH Scientific Methodology Supervisor



PÉTER FEHÉRVÁRI Statistician

**STUDENTS:** Eszter Bakó, Garmaa Gantsetseg, Eszter Gulyás, Emese Eszter Gunther, István László Horváth, Kata Illés, Dénes Kleiner, Fanni Adél Meznerics

SUPERVISORS: András Bánvölgyi (Supervisor of the month: July 2022), Andrea Böszörményi, Dezső Csupor, Tamás Horváth, Gellért Balázs Karvaly, Gábor Kökény, György Nagy

### **ESZTER** BAKÓ

SEMMELWEIS UNIVERSITY, DEPARTMENT OF PHARMACOGNOSY AND TOXICOLOGY





#### PROJECT DESCRIPTION

I am a PhD student at the Department of Pharmacognosy of Semmelweis University. I joined the Translational Medicine Program in 2021 and started working on my first project which is a metaanalysis examining the efficacy of topically applied essential oils in musculoskeletal disorders. For my second project in this program, I chose to write a clinical trial protocol. The clinical trial aims to investigate the vasodilatory and hyperemic effects of certain essential oils of gymnosperm species applied topically on the skin of healthy volunteers. The main goal of my research is to examine essential oils, balsams, and resins of gymnosperm species that have potential effects on human microcirculation. Establishing essential oil profiles of the selected species is ongoing research. Whereas skin blood flow measurements are going to be carried out to provide important information on the potential effects of the volatile compounds of the investigated plants on human microcirculation.

**AGE** 38 years SUPERVISOR(S) Andrea Böszörményi E-MAIL bakoeszterdr@gmail.com

## GARMAA GANTSETSEG





#### PROJECT DESCRIPTION

Garmaa is an **internal medicine specialist**, an **ambassador from Mongolia** in the Association of Hungarian Ph.D. and DLA Candidates, and a **Ph.D. student** at the Department of Basic and Translational Medicine, Semmelweis University. During her doctoral journey, she aims to **investigate the miRNAs** as potential anti-fibrotic agents in renal fibrosis. Now she is working on human renal cell culture. Her projects within the 12-month research fellowship program of the Centre for Translational medicine will consist of **two meta-analyses**. The **first study** will be the determination of the most dysregulated miRNAs in human and animal chronic kidney disease. The **second meta-analysis** will be on the diagnostic accuracy of miRNAs in CKD.

AGE 33 years SUPERVISOR(S) Gábor Kökény

E-MAIL gantsetseg.garmaa@gmail.com

### **ESZTER** GULYÁS

SEMMELWEIS UNIVERSITY, UNIVERSITY PHARMACY DEPARTMENT OF PHARMACY ADMINISTRATION





#### PROJECT DESCRIPTION

My name is Eszter and I am a clinical hospital pharmacist at the University Pharmacy Department of Pharmacy Administration of Semmelweis University. My main topic is therapeutic drug monitoring (TDM) of antibiotics in critically ill patients. As my first project will be conducting a meta-analysis about the therapeutic drug monitoring of beta-lactam antibiotics and its relation to PK/PD target attainment and to clinical outcomes. Regarding my second project will develop an analytical method for the TDM of colistin and to conduct its pharmacokinetic examination and clinical validation.

AGE 30 years SUPERVISOR(S) Gellért Balázs Karvaly **E-MAIL** gulyas.eszter@pharma.semmelweis-univ.hu

## István lászló horváth

SEMMELWEIS UNIVERSITY, UNIVERSITY PHARMACY DEPARTMENT OF PHARMACY ADMINISTRATION





#### PROJECT DESCRIPTION

I am working as a hospital-clinical pharmacist at Semmelweis University, University Pharmacy Department of Pharmacy Administration. With my focus being acute pancreatitis, I am completing a systematic review and a meta-analysis. Therefore, my first project is the investigation of the ulinastatin + somatostatin combination compared to somatostatin alone in the treatment of acute pancreatitis. The second project is an investigation of the PPIs' effect in acute pancreatitis in a systematic review and metaanalysis as well. I am also working on an additional project investigating clinical pharmacist involvement in health care across Europe. For this, I developed a questionnaire that will be distributed among bedside clinical pharmacists. As a plan, I am aiming to further develop a benchmarking system from the results of this questionnaire, which I would like to turn into a nationwide/ Europewide registry for all clinical pharmacists.

AGE 31 years SUPERVISOR(S) Dezső Csupor

**E-MAIL** horvath.istvan@pharma.semmelweis-univ.hu

## KATA ILLÉS

BAJCSY-ZSILINSZKY HOSPITAL AND CLINIC, DEPARTMENT OF OTO- RHINO-LARYNGOLOGY AND HEAD- AND NECK SURGERY





#### **PROJECT DESCRIPTION**

I am a PhD student at the Centre for Translational Medicine and a part-time clinical doctor at the Department of Oto- Rhino-Laryngology and Head- and Neck Surgery in Bajcsy-Zsilinszky Hospital and Clinic. My main interest is otology and middle ear surgery, treating both forms of chronic otitis media, cholesteatoma, and mesotympanic type with perforation on the tympanic membrane. From the scientific point of view, I am focusing on the improvement of middle ear surgery outcomes in chronic otitis media by comparing different surgical techniques and by analyzing the predictive factors of the surgery. Currently we are working on an interventional meta-analysis, comparing the effectiveness of mastoid obliteration versus the conventional canal wall-up technique in cholesteatoma surgery. I work on another meta-analysis about the predictive factors of type I tympanoplasty, which is the intervention for closing a perforation on the tympanic membrane.

AGE 27 years SUPERVISOR(S) Tamás Horváth E-MAIL i.kataaaa@gmail.com

### **DÉNES** KLEINER

SEMMELWEIS UNIVERSITY, UNIVERSITY PHARMACY DEPARTMENT OF PHARMACY ADMINISTRATION





#### PROJECT DESCRIPTION

I'm a clinical hospital pharmacist and an assistant lecturer at the University Pharmacy Department of Pharmacy Administration at Semmelweis University. I have a great interest in recent emerging plant-derived agents but also in health education. Therefore, my first project will be a meta-analysis of the efficacy of nabiximols as an additional treatment for the alleviation of spasticity, associated with multiple sclerosis, and the second project is to assess the off-label use of nabiximols. As a third project, I am planning an interventional study on the type of web-based tools that are best for educating breastfeeding women about the safety of over-the-counter drugs.

AGE 34 years SUPERVISOR(S) Dezső Csupor

E-MAIL deneskleiner@gmail.com

# FANNI ADÉL MEZNERICS



#### PROJECT DESCRIPTION

My name is Fanni and I am a PhD student within the Translational Medicine program at the Department of Dermatology, Venerology, and Dermatooncology at Semmelweis University. My focus is the application of platelet-rich plasma (PRP) treatment in the field of dermatology. I currently work on an interventional meta-analysis regarding the treatment of alopecia areata with PRP, and planning to conduct another meta-analysis about the role of PRP in chronic wound management. Platelet-rich plasma is a relatively new, constantly evolving treatment modality that holds an increasingly important role in the field of dermatology. It is already widely used in other medical fields, such as orthopedics, facial plastic surgery, and oral surgery.

AGE 26 years SUPERVISOR(S) András Bánvölgyi E-MAIL f.meznerics@gmail.com

# GROUP 2 DENTISTRY

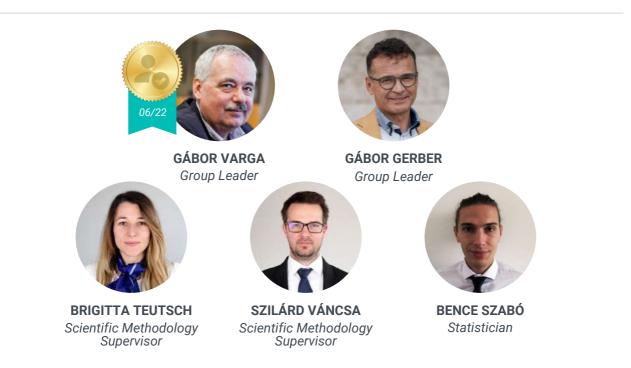


#### **INTRODUCTION TO THE GROUP**

09/21 01/22 05/22

The Dentistry group includes 11 students and their respective mentors, from various specialties and departments such as the Department of Anatomy (1), Department of Community Dentistry (2), Department of Conservative Dentistry (1), Department of Oral Biology (1), Department of Prosthodontics (5), Department of Periodontology (1). With the variety of departments involved, the main interests of the group include Alveolar Ridge Preservation, Dental Enamel, Dental Implant Prosthetics, Digital Dentistry, Halitosis, Maxillofacial Prosthodontics, Maxillofacial Surgery, Periodontal diseases, Temporomandibular Disorders and Teledentistry. Currently, a total of 22 meta-analyses (MA) are being developed, with 10 interventional, four prognostic, and eight diagnostics MAs, besides two clinical trials on initiation. The group also has several project students - undergraduate students that are having their first contact with high-level research and plan to join the program as PhD students in the future. As group leaders, we have Gábor Varga and Gábor Gerber, both highly experienced professors and researchers. Professor Varga is also the Operative Director of CTM and part of the Department of Oral Biology, while Professor Gerber is the dean of the Faculty of Dentistry. Group members understand the importance of participation and commitment in the program not only aiming the success at an individual level but as Faculty of Dentistry, where both young researchers and supervisors are actively part of this learning process. Group SMSs are Brigitta Teutsch and Szilárd Váncsa.

#### MEMBERS OF THE GROUP



**STUDENTS:** Alexander Schulze Wenning, Bianca Golzio Navarro Cavalcante, Zsuzsanna Domokos, Kata Kelemen, János König, Anna Németh, Eleonóra Sólyom, Eszter Ágnes Szalai, Péter Tajti, Eszter Uhrin, Viktória Vitai

SUPERVISORS: Judit Borbély, Réka Fazekas, Gábor Gerber, Péter Hermann (*Supervisor of the month: May* 2022), Beáta Kerémi, Krisztina Mikulás, Bálint Molnár, Orsolya Németh, Gábor Varga



### **ALEXANDER SCHULZE** WENNING

SEMMELWEIS UNIVERSITY, DEPARTMENT OF ORAL BIOLOGY





#### PROJECT DESCRIPTION

Alexander is a medical doctor and dentistry student, as well as a PhD student at the Doctoral School of Clinical Medicine. Alex joined the Translational Medicine Program in 2021. His main interest is maxillofacial surgery. The first project is a meta-analysis that compares maxillofacial growth in cleft lip and palate patients undergoing either one-stage or two-stage palatoplasty, aiming to provide evidence-based recommendations to guide this clinical decision and improve surgical outcomes and the life quality of those patients. The second project is another meta-analysis that investigates the clinical applicability of salivary miRNA as a non-invasive, early tumor diagnostic marker, increasing the opportunity for efficient treatment and implementing an easier, cheaper, and safer diagnostic tool.

AGE 29 years **SUPERVISOR(S)** Gábor Varga, Gábor Gerber E-MAIL a.schulzewenning@gmail.com

### **BIANCA** GOLZIO NAVARRO CAVALCANTE

SEMMELWEIS UNIVERSITY, DEPARTMENT OF ORAL BIOLOGY



#### PROJECT DESCRIPTION

Bianca is a 2nd year PhD student at Doctoral School of Clinical Medicine participating in the Translational Medicine Program. Her main focus of interest is dental enamel and its developmental defects. Her first project is a meta-analysis about the efficacy of CPP-ACP as a remineralizing agent on early stages of caries lesions, aiming to provide minimally invasive and cost-effective approaches with no discomfort to the patient. Her second topic is another metaanalysis that targets the role of CPP-ACP on management of hypersensitivity and remineralization of teeth affected by Molar Hypomineralization (MH), aiming to improve aesthetics and sensitivity discomfort, arresting caries progression and preventing further complications such as pulp involvement, tooth loss, dental fear and anxiety from the patient. Through these projects she focus on cost-effective and non-invasive clinical solutions for the therapeutic restoration of tooth enamel. She is also working in a basic science research, where she aims to understand the molecular and functional mechanisms affecting ameloblasts and enamel formation in rodent incisors.

AGE 28 years SUPERVISOR(S) Gábor Varga E-MAIL biancagolzio@hotmail.com



### ZSUZSANNA DOMOKOS

SEMMELWEIS UNIVERSITY, DEPARTMENT OF COMMUNITY DENTRISTRY





#### PROJECT DESCRIPTION

I am a PhD student and a periodontology resident at the Department of Community Dentistry, participating in the clinical PhD fellowship program. My main interest is in periodontal diseases. The aim of my first meta-analysis is to investigate the association between two multifactorial diseases: periodontal disease and inflammatory bowel diseases, further developing the knowledge about their connection and improving their treatment through a multidisciplinary job, involving dentists and medical doctors. The first topic was carried out in the first year of the PhD program and the manuscript has been submitted to the targeted Q1 journal. My second project focuses on investigating the clinical applicability of MMP-8 level measurement in periodontology department, which can be a novel and simple method in periodontal examination.

AGE 25 years SUPERVISOR(S) Orsolya Németh E-MAIL domokoszsuzsa23@gmail.com

**KATA KELEMEN** SEMMELWEIS UNIVERSITY, DEPARTMENT OF PROSTHODONTICS





#### PROJECT DESCRIPTION

I am a third-year resident at the Department of Prosthodontics, Semmelweis University. I am participating in the 24-month PhD fellowship program and is interested in temporomandibular disorders. My first project is a meta-analysis investigating the efficacy of additional splint therapy to physiotherapy in patients with myogenic temporomandibular disorders. My second topic is also a meta-analysis that will compare the effectiveness of PRP (platelet rich plasma) and hyaluronic acid treatment in temporomandibular osteoarthritis. These studies aim to understand the clinical effectiveness and optimize the treatment for those patients with more efficient, less painful, and cheaper approaches.

AGE 28 years SUPERVISOR(S) Péter Hermann E-MAIL kelemenkata18@gmail.com



## JÁNOS KÖNIG

SEMMELWEIS UNIVERSITY, DEPARTMENT OF PROSTHODONTICS





#### PROJECT DESCRIPTION

I am a clinical specialist at the Department of Prosthodontics, Semmelweis University. I am participating in the 24-month clinical PhD fellowship program. My main field of interest is maxillofacial prosthodontics. My first project was a meta-analysis evaluating the differences between 3D surface scanning technologies' performance on human faces regarding facial prosthetic rehabilitation, aiming to achieve better and more comfortable impression-taking for patients. My second project is about the comparative evaluation of surgical reconstruction and obturator prostheses in patients with maxillectomy defects. I am aiming to prove that prosthetic solutions can be just as effective as surgical interventions. My additional goal is to create a patient registry of prosthetic rehabilitation for patients with facial defects in Hungary. I am also taking part in graduate and postgraduate education in the field of prosthodontics and dental technology in Hungarian, English, and German.

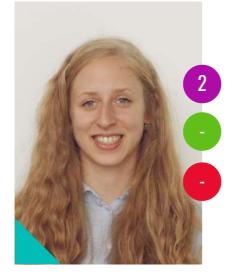
AGE 29 years SUPERVISOR(S) Péter Hermann

E-MAIL janoskonigdmd@gmail.com

## ANNA NÉMETH



SEMMELWEIS UNIVERSITY, DEPARTMENT OF PROSTHODONTICS



#### PROJECT DESCRIPTION

I am a third-year resident at the Department of Prosthodontics, Semmelweis University, and taking part in the 24-month PhD fellowship program. I am mainly interested in digital dentistry and 3D printing. My first project is a meta-analysis investigating the accuracy of 3D-printed dental models compared to the digital reference models. My second meta-analysis investigates the accuracy of additive manufacturing of fixed dental restorations compared to subtractive manufacturing. As a third project a clinical trial about the influence of material used on printing accuracy was chosen. My goal is to evaluate the possibilities of using 3D printing in prosthodontics and show a more efficient workflow and more accurate results that benefit dentists and patients. I also take part in the education of dental students in the field of Prosthodontics.

AGE 26 years SUPERVISOR(S) Judit Borbély E-MAIL nemethanna18@gmail.com



## ELEONÓRA SÓLYOM

SEMMELWEIS UNIVERSITY, DEPARTEMENT OF CONSERVATIVE DENTISTRY





#### PROJECT DESCRIPTION

My name is Eleonora, and I am a clinical specialist and a PhD student at the Department of Periodontology, at Semmelweis University. I am also a participant in in the 24 months clinical fellowship program, currently working on a meta-analysis about the safety and efficacy of autogenous tooth bone grafts. My second project is a prospective randomized clinical trial comparing 3 different alveolar ridge preservation techniques. These studies aim to further investigate novel graft materials and techniques for alveolar ridge preservation. I also take part in the education of dental students and postgraduate students at the Department of Periodontology in Hungarian, English and German language.

AGE 28 years **SUPERVISOR(S)** Réka Fazekas, Bálint Molnár E-MAIL eleonorasolyom@gmail.com

### **ESZTER ÁGNES SZALAI** SEMMELWEIS UNIVERSITY, DEPARTEMENT OF CONSERVATIVE DENTISTRY





#### PROJECT DESCRIPTION

I am a clinical specialist in Conservative dentistry and Prosthodontics and a PhD student at the Department of Restorative Dentistry and Endodontics, at Semmelweis University. I participate in a 12-month clinical fellowship program at the Institute for Translational Medicine. Also worked on a meta-analysis of randomized controlled trials, examining the efficacy of chlorine dioxide-containing mouthwashes in halitosis, aiming to show that chlorine dioxide-containing mouthwashes could be the new gold standard without known side effects. My second topic is also a meta-analysis of the optimal measurement of halitosis. I also plan a randomized clinical trial with chlorine dioxide mouthwash. With these projects, my aim is to increase public concern about bad breath, leading to the use of mouth rinses to prevent and manage halitosis, improving patients' well-being. I also teach Restorative Dentistry and Endodontics in the Hungarian and English language program.

AGE 37 years **SUPERVISOR(S)** Beáta Kerémi E-MAIL szalai.eszter85@gmail.com



## PÉTER TAJTI

SEMMELWEIS UNIVERSITY, DEPARTMENT OF PROSTHODONTICS





#### PROJECT DESCRIPTION

I am a third-year resident at the Department of Prosthodontics, Semmelweis University. I also participate in the 24-month clinical PhD fellowship program. My first project is a meta-analysis about the clinical performance of monolithic zirconia compared to the gold standard metal-ceramic in implant-supported single crowns. As my second project I am conducting a meta-analysis investigating the biological outcomes of using short vs. long implant abutments. My results can help in widening evidence-based knowledge and facilitating decision making for clinicians aiming for function, esthetics, and high patient satisfaction. My additional goal is to create proof-of-concept studies in the field of digital implant prosthodontics. I am also taking part in the education of dental students in the field of Prosthodontics in Hungarian and English language.

AGE 27 years **SUPERVISOR(S)** Krisztina Mikulás E-MAIL tajti.peter@dent.semmelweis-univ.hu

**ESZTER UHRIN** SEMMELWEIS UNIVERSITY, DEPARTMENT OF COMMUNITY DENTRISTRY





#### PROJECT DESCRIPTION

I am a PhD student at Doctoral School of Clinical Medicine and a clinical dentist at the Department of Community Dentistry. My first project is a meta-analysis about the use of teledentistry in the differential diagnosis of oral lesions. As a second project I am conducting another meta-analysis with the topic on the effectiveness of oral hygiene programs for post-stroke inpatients. In the future, I would like to develop a teledentistry-driven diagnostic application that can help in the prevention of oral cancer. Teledentistry is beneficial by increasing access to care, cost, and time-effectiveness. More patients can have a specialists' opinion on oral lesions, as well as referral opinion that is crucial to the diagnosis.

**AGE** 27 years SUPERVISOR(S) Orsolya Németh E-MAIL eszter1221uhrin@gmail.com



### **VIKTÓRIA VITAI** SEMMELWEIS UNIVERSITY, DEPARTMENT OF PROSTHODONTICS



#### PROJECT DESCRIPTION

I am a clinical specialist at the Department of Prosthodontics, Semmelweis University, participating in the 24-month clinical PhD fellowship program. Currently working on a meta-analysis on the accuracy of intraoral scans compared to reference scans in full arch. My second project is another meta-analysis about the comparison of Tooth Shade selection with Intraoral Scanners to Spectrophotometers. My third topic will be a clinical study to investigate the effect of the number of scan images on the accuracy of intraoral scanners. These studies can bring more evidence-based knowledge about the accuracy, precision, and trueness of these devices, consequently aiming for cost and time effectiveness, reducing errors, and improving patient's comfort. Additionally, my goal is to provide proof-of-concept studies in the field of digital prosthodontics. I'm also taking part in the education of dental students in the field of Prosthodontics in Hungarian and English language.

**AGE** 29 years SUPERVISOR(S) Judit Borbély E-MAIL vitai.viktoria@dent.semmelweis-univ.hu

# GROUP 3 GYNECOLOGY & UROLOGY





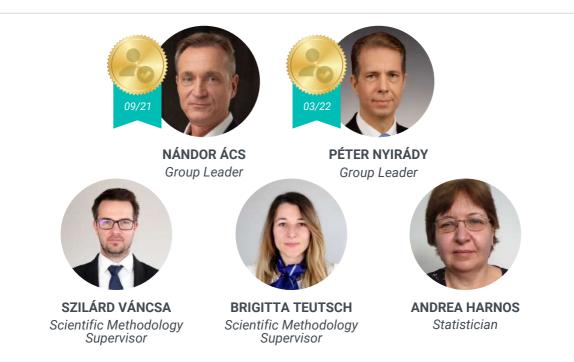
### GROUP 3 GYNECOLOGY & UROLOGY

#### **INTRODUCTION TO THE GROUP**



In September 2021 with the leadership of professor Nándor Ács and Péter Nyirády, 12 students and 14 supervisors began their PhD projects in the Gynecology and Urology group. Most of the participants are gynecologists, but there is also a dietitian, a radiologist, and three urologists working in the group. The diversity of the group results in a great variety of research topics, such as investigations of premature delivery, female and male infertility, and precision oncology and radiology. The group is particularly active; meetings provide a creative, interdisciplinary, academic atmosphere that has already generated an exceptional number of high-quality projects. 16 interventional-, four observational- and two network meta-analyses are being conducted. Moreover, 2 registries, 4 clinical trials, and 4 retrospective cohort studies are being undertaken by the students as well. As a result of the high productivity of the participants, the group was awarded the "Group of the Month" prize in October 2021 and Professor Ács was named the "Supervisor of the month" in September. Over the course of their first year, both students and supervisors have shown great commitment, and enthusiasm for the program and are progressing with a clear vision toward a scientific career. Group SMSs are Brigitta Teutsch and Szilárd Váncsa, both are experienced PhD students, Szilárd is already starting his 4th year as an SMS. Also, they are both interested in gastroenterology, Szilárd particularly in hepatology and pancreatology, and Brigi in radiology.

#### **MEMBERS OF THE GROUP**



**STUDENTS:** István Baradács, Tamás Fazekas, Teodóra Filipov, Dorina Greff, Balázs Hamar, Eszter Hoffmann, Anna Evelin Juhász, Balázs Komoróczy, Ákos Mátrai, Boglárka Pethő, Anett Szabó, Ádám Dániel Széles

**SUPERVISORS:** Nándor Ács, Zsófia Benkő, Pál Ákos Deák, Csaba Demendi, Réka Hermanné Juhász, Eszter Mária Horváth, Zsolt Kopa, Balázs Lintner, Zsolt Melczer, Tibor Szarvas, Szabolcs Várbíró

## ISTVÁN BARADÁCS

SEMMELWEIS UNIVERSITY, DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY





#### PROJECT DESCRIPTION

I am resident gynecologist at the Department of Obstetrics and Gynecology of Semmelweis University. I am currently working on a meta-analysis examining the efficacy and safety of targeted therapy in gynecological malignancies. The clinical implication of this study may be the improved overall survival rate of cancer patients. I am also aiming to participate in a clinical trial with the goal of developing a unified testing and scoring system for the diagnosis of HER2-positive endometrial carcinoma.

AGE 28 years SUPERVISOR(S) Balázs Lintner E-MAIL baradacsist@gmail.com

### TAMÁS FAZEKAS SEMMELWEIS UNIVERSITY, DEPARTMENT OF UROLOGY





#### PROJECT DESCRIPTION

I am a resident in urology. In this PhD program my main research areas in this include molecular markers of prostate cancer and urothelial cancers. My first and second meta-analysis compares the different treatment options in BRCA positive metastatic castrationresistant prostate cancer. These studies aim to optimize the therapeutic decision making in BRCA positive patients. I am aiming to establish a prospective registry of prostate cancer.

AGE 30 years SUPERVISOR(S) Tibor Szarvas E-MAIL fazekastamas192@gmail.com

## **FEODÓRA** FILIPOV

SEMMELWEIS UNIVERSITY, DEPARTMENT OF TRANSPLANTATION AND SURGERY





#### PROJECT DESCRIPTION

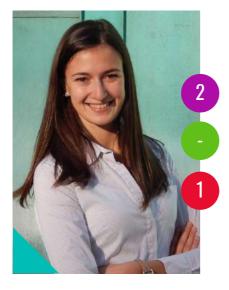
I am aspiring to become a radiology specialist, with the goal in mind to complete multiple research projects within the field. I am currently working on a meta-analysis, assessing the accuracy of ultrasoundbased elastography in the detection of renal allograft dysfunction. My other focus is to conduct a registry analysis combined with a meta-analysis on the topic of cryoablation for fibroadenomas. In addition, I am responsible for planning a single center clinical trial to assess the efficacy of treating early-stage malignant breast tumors minimally invasively with cryoablation.

AGE 27 years SUPERVISOR(S) Pál Ákos Deák

**E-MAIL** filipovdora@gmail.com

**DORINA** GREFF SEMMELWEIS UNIVERSITY, DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY





#### PROJECT DESCRIPTION

I am a resident doctor in obstetrics and gynecology and taking part in a PhD fellowship program. I am currently working on a metaanalysis, comparing the efficacy and safety of metformin and inositols in polycystic ovary syndrome. Meanwhile, I am also working on a second meta-analysis, investigating the effectiveness of inositol in the prevention of gestational diabetes mellitus in pregnant women. My additional goal is to establish a clinical trial considering gestational diabetes mellitus.

26 years

AGE

SUPERVISOR(S) Szabolcs Várbíró, Eszter Mária Horváth

**E-MAIL** greffdorina@gmail.com

## BALÁZS HAMAR

SEMMELWEIS UNIVERSITY, DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY





#### PROJECT DESCRIPTION

I am a resident doctor in obstetrics and gynecology. My main field of interest is HPV infection. Currently, I am working on a meta-analysis examining the effect of trichomonas infection on cervical carcinogenesis. As well as I am co-investigator in a meta-analysis that evaluates preterm birth and possible screening methods. My second project is another meta-analysis that investigates the efficacy of topical imiquimod on the reduction of cervical intraepithelial neoplasia. Cervical cancer has a significant burden on society; therefore I aim to prevent cervical neoplasia.

AGE 27 years

AGE

29 years

SUPERVISOR(S) Zsolt Melczer E-MAIL balazs.hamar@gmail.com

### ESZTER HOFFMANN

SEMMELWEIS UNIVERSITY, DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY





#### PROJECT DESCRIPTION

I am a PhD student at the Department of Obstetrics and Gynecology at Semmelweis University, Budapest, Hungary. Currently I am working on two meta-analyses on the role of vaginal infection in preterm birth and premature rupture of membranes. The first metaanalysis aims to investigate the efficacy of the regular screening of the vaginal flora during pregnancy to reduce the rate of preterm birth. I recently started the second meta-analysis, examining the effectiveness of the treatment of the abnormal vaginal flora during pregnancy to reduce the rate of preterm birth.

**SUPERVISOR(S)** Csaba Demendi, Nándor Ács **E-MAIL** h.eszter@icloud.com

### ANNA EVELIN JUHÁSZ ALBERT SCHWEITZER HOSPITAL, HATVAN





#### PROJECT DESCRIPTION

I am a dietitian, and my primary goal is to summarize the evidence regarding the dietary management of polycystic ovary syndrome (PCOS) that can be applied from a nutritional point of view, with special regard to the role of certain dietary fibers. I am currently working on two network meta-analyses. One of them investigates the effects of dietary fiber supplementation on glycemic control and lipid profile in patients with type 2 diabetes. In this project, different types of dietary fibers will be compared to find out which is most effective for normalizing glucose levels and lipid abnormalities. My second network meta-analysis focuses on the effects of dietary interventions on patients with PCOS. I am also responsible for planning a protocol for a clinical trial that aims to investigate the effects of dietary fiber supplementation on the metabolic and hormonal parameters of women with PCOS.

AGE 26 years **SUPERVISOR(S)** Réka Hermanné Juhász E-MAIL juhaszannaevelin@gmail.com

### **BALÁZS KOMORÓCZY** SEMMELWEIS UNIVERSITY, DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY





#### PROJECT DESCRIPTION

I am a resident in obstetrics and gynecology, participating in the PhD fellowship program. I am working on a systematic review and metaanalysis examining the optimal dose and initiation time of low-dose aspirin for pregnant women to prevent preeclampsia, preterm birth, and intrauterine growth restriction. My second project is a prospective observational study at Semmelweis University Department of Obstetrics and Gynaecology, which aims to predict preterm birth in singleton pregnancies by measuring the cervical length on the second-trimester ultrasound screening and obtaining detailed maternal history in the Hungarian population.

**AGE** 32 years

SUPERVISOR(S) Zsófia Benkő E-MAIL komoroczy.balazs@gmail.com

## **ákos** mátrai

SEMMELWEIS UNIVERSITY, DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY





#### PROJECT DESCRIPTION

I work as a specialist at the Department of Obstetrics and Gynecology of Semmelweis University. In my first academic year, I completed a meta-analysis examining the effects of maternal influenza during pregnancy on birth defects. I am working on my second project which is a registry analysis from the database of the Hungarian Case-Control Surveillance of Congenital Abnormalities. In my analysis, I investigate the role of maternal influenza on the incidence of non-chromosomal birth defects, in more than 89000 pregnant women.

AGE 33 years SUPERVISOR(S) Nándor Ács E-MAIL matraiakos@gmail.com

## BOGLÁRKA PETHŐ

SEMMELWEIS UNIVERSITY, DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY





#### PROJECT DESCRIPTION

I'm a specialist in obstetrics and gynecology at Semmelweis University and am also participating in a clinical PhD fellowship program. I am currently working on a meta-analysis, assessing the effects of maternal age on congenital anomalies. My second project is a population-based analysis, examining the impacts of maternal social background and maternal diseases on pregnancy outcomes. Based on my observations, advanced age isn't the only risk factor for congenital anomalies. My main area of interest is perinatology, and I am planning to take part in establishing a registry for pregnant patients with additional risk factors.

**AGE** 33 years SUPERVISOR(S) Nándor Ács E-MAIL dr.pethoboglarka@gmail.com

### ANETT SZABÓ

SEMMELWEIS UNIVERSITY, DEPARTMENT OF UROLOGY





#### PROJECT DESCRIPTION

I am a second-year PhD student and since autumn, also a resident in Urology and an SMS. My main field of interest is andrology, and I am conducting two meta-analyses about sperm DNA fragmentation – one of them examines the risk factors that worsen it and the second one looks at interventions that could potentially improve it. Their merged aim for these topics is that by knowing the risk factors, we can specifically target them to improve fertility. I'm also conducting a post-hoc analysis on non-palpable testicular tumors' testes-sparing surgeries to show that since most are benign the radicle removal of the entire testicle is an overtreatment. Lastly, I am taking part in the application of a newly developed artificial intelligence software for the prediction of the success of sperm retrieval in certain azoospermic patients

AGE 27 years SUPERVISOR(S) Zsolt Kopa E-MAIL a.szabo1995@gmail.com

### **ÁDÁM DÁNIEL SZÉLES** SEMMELWEIS UNIVERSITY, DEPARTMENT OF UROLOGY





#### PROJECT DESCRIPTION

I am a resident in urology and is also participating in the Translational Medicine PhD program. Currently I am working on my first meta-analysis where I am assessing the prognostic significance of serum PD-L1 and serum PD-1 in human malignancies treated with immune checkpoint inhibitors. Since immune checkpoint inhibitor usage is emerging in urology in my second meta-analysis, I am going to investigate the prognostic and predictive values of different laboratory markers in urothelial cancer patients treated with immune checkpoint inhibitors. I also plan to create a retrospective cohort analysis assessing the prognostic significance of serum PD-L1 in Upper Tract Urothelial Cancer patients.

**AGE** 27 years

SUPERVISOR(S) Tibor Szarvas E-MAIL szelesadam95@gmail.com

# GROUP 4 CARDIOLOGY





#### **INTRODUCTION TO THE GROUP**

The cardiology group consists of 6 students, interested in a wide range of research topics. Many students are also residents at the Heart and Vascular Centre at Városmajor, with the exception of one full-time PhD student and one specialist candidate at the Gottsegen National Cardiovascular Institute. Topics dealt with are cardiac resynchronization therapy, cryptogenic strokes, electrophysiology, resuscitation, drug-eluting stents, anticoagulation, and leadless pacemakers. There are eight ongoing meta-analyses, additionally planned projects are five randomized controlled trials, an international survey, and an observational study. The scientific methodology supervisors of the group are Rita Nagy and Marie Engh. Rita is a pediatric resident at Heim Pal National Pediatric Institute and a 3rd year PhD student at the CTM. Marie is an international PhD student at the CTM, whose interest is mainly in pancreatitis and pancreatic cancer. The group leader, Professor Béla Merkely, is an interventional cardiologist, the director of the heart and vascular centre, and the rector of Semmelweis University.

#### **MEMBERS OF THE GROUP**



BÉLA MERKELY Group Leader



**ENDRE ZIMA** Group Leader



**RITA NAGY** Scientific Methodology Supervisor



MARIE ANNE ENGH Scientific Methodology Supervisor



PÉTER FEHÉRVÁRI Statistician

**STUDENTS:** Boldizsár Kiss, Péter Márton Kulyassa, Henriette Mészáros, Enikő Pomozi, Sara Gharehdaghi Khajeh Ghiasi, Péter Vámosi, Boglárka Veres

**SUPERVISORS:** Pál Ábrahám, Gábor Duray, István Ferenc Édes, Annamária Kosztin, Béla Merkely, Klaudia Vivien Nagy, Sándor Nardai, Zoltán Szeberin, Endre Zima (*Supervisor of the month: April 2022*)

### **BOLDIZSÁR KISS** SEMMELWEIS UNIVERSITY, HEART AND VASCULAR CENTRE



#### PROJECT DESCRIPTION

I am a cardiology resident at the Heart and Vascular Centre at Semmelweis University. My first project is a meta-analysis, which aims to investigate the accuracy and reliability of different neurological prediction score systems in cases with out-of-hospital cardiac arrest (OHCA) after successful resuscitation. Using such prognostic score systems in the intensive care unit can prevent the healthcare system to apply costly and intensive resources in cases of futility. My second project is a meta-analysis of the benefit of preventive short-term antibiotic therapy after successful resuscitation. As my third project, a randomized clinical trial is planned to be settled on prophylactic antibiotic treatment after successful resuscitation.

AGE 26 years SUPERVISOR(S) Endre Zima **E-MAIL** b.kiss96@gmail.com

### **PÉTER MÁRTON KULYASSA** SEMMELWEIS UNIVERSITY, HEART AND VASCULAR CENTRE





#### PROJECT DESCRIPTION

I am a cardiology resident at the Heart and Vascular Centre at Semmelweis University. My first project is an interventional metaanalysis investigating whether early or late in-stent restenosis of drug-eluting stents is a predictor of the outcome of intervention with a drug-coated balloon. Second project's purpose is to publish the protocol of a randomized controlled trial comparing different patent hemostasis devices using biological and chemical compounds to the "gold standard" mechanical compression device. As a third project, there is a randomized controlled trial comparing different devices for the treatment of in-stent restenosis.

**AGE** 30 years SUPERVISOR(S) István Ferenc Édes

E-MAIL peter.kulyassa@gmail.com

### HENRIETTE MÉSZÁROS SEMMELWEIS UNIVERSITY, HEART AND VASCULAR CENTRE





#### PROJECT DESCRIPTION

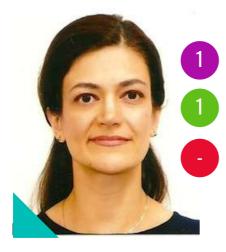
I work at the Heart and Vascular Centre as a first-year cardiology resident. In my meta-analysis, she investigates whether the decreased left atrial strain is associated with the occurrence of atrial fibrillation. I am part of the persistent foramen ovale (PFO) closure working group in the clinic, therefore as a second project, I intend to conduct a randomized clinical trial on this topic. My goal is to compare the effect of the high and low mesh density closure devices on the atrial strain and incidence of atrial fibrillation.

**AGE** 27 years **SUPERVISOR(S)** Béla Merkely, Sándor Nardai, Pál Ábrahám

E-MAIL meszaros.henriette0923@gmail.com

## SARA GHAREHDAGHI KHAJEH GHIASI





#### PROJECT DESCRIPTION

I am a cardiology specialist candidate and am interested in leadless pacemakers. My first project is a meta-analysis of the safety and efficacy of leadless pacemakers when compared to conventional pacemakers. I hypothesize that these types of pacemakers are superior to conventional ones in terms of mortality and complications. My second project will be an international survey investigating the real-life selection of patients for leadless pacemaker implantation and aiming to discover the potential barriers to their use in eligible patients. I intend to send a pre-defined questionnaire to the network of Arrhythmia societies.

**AGE** 42 years

SUPERVISOR(S) Gábor Duray E-MAIL saraghrh@gmail.com

## PÉTER VÁMOSI

SEMMELWEIS UNIVERSITY, HEART AND VASCULAR CENTER





#### PROJECT DESCRIPTION

I am a cardiology resident at the Heart and Vascular Centre with an interest in the technical aspects of cardiac electrophysiological studies. My first project is a meta-analysis on the potential benefits of ultrasound guidance during femoral venous puncture for electrophysiological interventions. As a second project, I aim to perform a randomized controlled trial on ultrasound guidance for femoral venous puncture and its complications. Both studies aim to decrease the major vascular complication rates. I also plan to perform a second meta-analysis on the effect of atrioventricular node ablation in heart failure patients with atrial fibrillation undergoing cardiac resynchronization therapy.

AGE 33 years **SUPERVISOR(S)** Klaudia Vivien Nagy E-MAIL peter.vamosi.s@gmail.com

### **BOGLÁRKA VERES** SEMMELWEIS UNIVERSITY, HEART AND VASCULAR CENTER



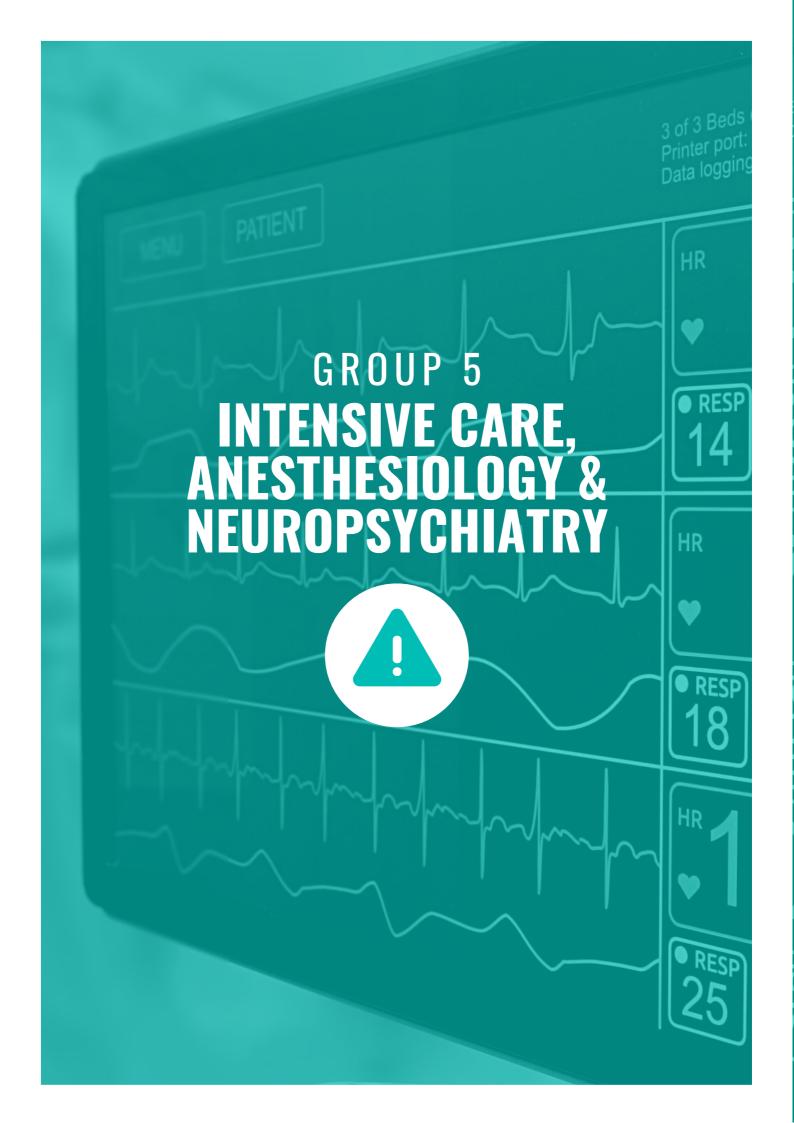


#### PROJECT DESCRIPTION

I am a full-time, second-year PhD student interested in cardiac devices and remote monitoring. My first project is a meta-analysis comparing mortality outcomes for cardiac resynchronization therapy with and without a defibrillator. My study would help in the adequate choice of therapy in heart failure patients. My second project will be a meta-analysis as well, which aims to investigate whether remote home monitoring may improve patient outcomes in heart failure patients when compared to standard care. Remote monitoring could help in the early identification of heart failure progression and decrease mortality in this patient group.

**AGE** 26 years

**SUPERVISOR(S)** Béla Merkely, Annamária Kosztin E-MAIL boglarka.sara.veres@gmail.com



### GROUP 5 INTENSIVE CARE, ANESTHESIOLOGY & NEUROPSYCHIATRY

GROUP MEETINGS WEDNESDAY, 11:30 AM - 2 PM

#### **INTRODUCTION TO THE GROUP**

The Anesthesiology and Neuropsychiatry group has 11 students in the field of neurology specialists, resident doctors of neurology, psychiatry, pediatrics, orthopedics, anesthesiology, and emergency medicine. The range of topics varies from the management of cerebral palsy, Alzheimer's disease, multiple sclerosis, myasthenia gravis, management of emergency patients, sedation management and circadian disruption in pediatric ICU patients, ventilation settings during anesthesia, goal-directed fluid therapy, preoperative carbohydrate loading all the way to the use of hemadsorption in liver failure. Currently, there are 20 meta-analyses going on. Furthermore, there are three observational trials, a randomized controlled trial, and two prospective registries planned. The group leaders are Professor Zsolt Molnár and Gábor Csukly. Professor Molnár is a well-known name in the field of Anesthesiology, while Gábor Csukly is a psychiatrist specialty doctor, and researcher in the field of cognitive sciences. The SMS of the group is Marie Engh.

#### MEMBERS OF THE GROUP



**ZSOLT MOLNÁR** Group Leader



GÁBOR CSUKLY Group Leader



MARIE ANNE ENGH Scientific Methodology Supervisor



PÉTER MÁTRAI Statistician

**STUDENTS:** Orsolya Gresits, Zsolt Huszár, Emőke Henrietta Kovács, Katalin Lugosi, Márk Pavlekovics, Anna Réka Sebestyén, Gergő Vilmos Szabó, Ambrus Szemere, Csenge Erzsébet Szigetváry, Caner Turan, Mátyás Vezér

SUPERVISORS: Gábor Csukly, Klaudia Horváth, Klára Horváth, Zsolt Illés, Gábor Lovas, Zsolt Mezei, Zsolt Molnár, Máté Rottler, Zoltán Ruszkai, Krisztián Tánczos, Tamás Terebessy, Marcell Virág

### **ORSOLYA** GRESITS

SEMMELWEIS UNIVERSITY, DEPARTMENT OF ORTHOPAEDICS





#### PROJECT DESCRIPTION

I am a full-time PhD student at the Department of Orthopaedics with an interest in the treatment of cerebral palsy, which is a group of permanent movement disorders that appear due to a brain damage in early childhood. My first project is a systematic review and metaanalysis on the functional benefits of upper limb botulinum toxin A injection. In the second project, my group is investigating whether the femoral derotation osteotomy has a positive impact on the gait of children with cerebral palsy. It will also be a systematic review and meta-analysis.

AGE 33 years **SUPERVISOR(S)** Tamás Terebessy E-MAIL gresits.orsolya@gmail.com

## **ZSOLT** HUSZÁR

SEMMELWEIS UNIVERSITY, DEPARTMENT OF PSYCHIATRY AND PSYCHOTHERAPY





#### PROJECT DESCRIPTION

My main focus is on Alzheimer's disease, while I am a resident doctor at the Department of Psychiatry and Psychotherapy, Semmelweis University. My first project is a meta-analysis investigating if the elevated amyloid level in the cerebrospinal fluid (CFS) or on computed tomography scan is a prognostic factor of cognitive decline in cognitively unimpaired patients, with or without the presence of hyperphosphorylated Tau protein. I am also planning to set up a registry analysis to identify region-specific risk factors for the development of dementia in Hungarian patients. I am aiming to clarify the role of cardiovascular disease, diabetes, and late-onset depression by follow-up visits at their "memory ambulance".

**AGE** 33 years SUPERVISOR(S) Gábor Csukly E-MAIL huszarzss@gmail.com

## EMŐKE HENRIETTA KOVÁCS

FUNDENI CLINICAL INSTITUTE, DEPARTMENT OF ANESTHESIOLOGY, BUCHAREST





#### PROJECT DESCRIPTION

I am a resident at Fundeni Clinical Institute, Department of Anesthesiology, Bucharest. As my first project, I will conduct a systematic review and meta-analysis about the safety and efficacy of different anticoagulant doses applied for thrombosis prophylaxis on clinical outcomes in COVID-19. I aim to investigate whether higher anticoagulant doses than those used in routine prophylaxis have more beneficial effects on clinical outcomes without jeopardizing safety in COVID-19 patients. As my second project, I will perform a prospective meta-analysis about the effects and safety of fibrinolytic therapy in critically ill Covid-19 patients with acute respiratory distress syndrome. Lastly, I plan to initiate a multicentric prospective observational study on the effects of immunomodulation with Tocilizumab on the coagulation system in critically ill Covid-19 patients.

AGE 28 years **SUPERVISOR(S)** Zsolt Molnár, Krisztián Tánczos E-MAIL emsikee@gmail.com

### **KATALIN LUGOSI** BAJCSY-ZSILINSZKY HOSPITAL AND CLINIC, DEPARTMENT OF NEUROLOGY





#### PROJECT DESCRIPTION

I am a neurology specialist at the Bajcsy-Zsilinszky Hospital and Clinic, Budapest, and planning to investigate the cognitive impairment in patients with multiple sclerosis (MS). I will perform a systematic review and meta-analysis on the prevalence of cognitive impairment in the different clinical subtypes of multiple sclerosis. For my second meta-analysis in regard of deciphering wide range of previously reported prevalence rates in overall cognitive impairment of MS with clinical and demographic determinants. I also plan to establish a registry by investigating potential prognostic markers for the progression of cognitive impairment in patients with MS, early in the disease course. The results of these studies will help in the early neurocognitive rehabilitation in subtypes with higher cognitive impairment prevalence.

AGESUPERVISOR(S)E-MAIL35 yearsZsolt Mezei, Klaudia Horváthlugosikacci@gmail.com

## MÁRK PAVLEKOVICS

SEMMELWEIS UNIVERSITY, JAHN FERENC SOUTH-PEST HOSPITAL AND CLINIC





#### PROJECT DESCRIPTION

My name is Márk and I am a resident of neurology at Jahn Ferenc Dél-Pesti Hospital, my interested is in myasthenia gravis and its epidemiological and therapeutic landscape. As a first project, I will compare the efficacy and safety of intravenous immunoglobulin and plasma exchange therapy in moderate to severe myasthenia gravis through a systematic review and meta-analysis. As a clinical implication of this study, if the two interventions are similar in effectiveness, then they can substitute each other. As a second project, I am planning to establish a national registry for myasthenia gravis. The main goal of the Myasthenia Gravis registry is to explore the incidence, the prevalence of the disease, and the mean age of onset. My third project, I am planning to update and continue an existing Neuromyelitis Optica Spectrum Disease registry.

AGE 32 years **SUPERVISOR(S)** Gábor Lovas, Zsolt Illés E-MAIL mrkpavlekovics@gmail.com

# ANNA RÉKA SEBESTYÉN





#### PROJECT DESCRIPTION

My interest is in pediatrics, and she works at Heim Pál National Pediatric Institute. I currently work on a systematic review and metaanalysis, and a two-arm randomized controlled trial protocol. In my meta-analysis, I investigate the effect of preoperative carbohydrate loading on postoperative outcomes in patients undergoing elective major non-cardiac surgery. I would like to test whether preoperative carbohydrate loading reduces the postoperative stress response, postoperative insulin resistance, and preoperative fasting time, leading to a shorter length of hospital stay. As my second project, I plan a protocol to compare multimodal individualized, contextualized management of intraoperative cardiovascular dynamics to conventional management in patients undergoing major pancreatic surgery.

AGE 25 years SUPERVISOR(S) Zsolt Molnár, Marcell Virág E-MAIL annareka97@gmail.com

### **GERGŐ VILMOS** SZABÓ SZENT GYÖRGY HOSPITAL, SZÉKESFEHÉRVÁR





#### PROJECT DESCRIPTION

Gergő is an oxyologist and emergency physician specialist at Szent György Hospital, Székesfehérvár. His first project in the PhD Program is a systematic review and meta-analysis about the added value of Point of Care Ultrasound (PoCUS) use in the management of patients admitted with acute dyspnoea in the A&E. His main objective is to examine whether PoCUS usage added to conventional modalities improves clinical outcomes in patients with acute onset dyspnoea. His second project is another meta-analysis about comparing the efficacy of 0.9 % NaCl versus balanced electrolyte solutions (BES) in resolving diabetic ketoacidosis (DKA) in adults admitted to the A&E. Evidence is still controversial on this topic, therefore he aims to perform a meta-analysis of all published studies in the field and provide further evidence regarding the best type of fluid for resuscitation in DKA.

AGE 34 years SUPERVISOR(S) Zsolt Molnár, Máté Rottler F-MAII szabogvilmos@gmail.com

### **AMBRUS** SZEMERE SEMMELWEIS UNIVERSITY, SECOND DEPARTMENT OF PAEDIATRICS





#### PROJECT DESCRIPTION

My interest is in pediatrics, and I work at Semmelweis University, Second Department of Pediatrics. My first project is a systematic review and meta-analysis of the effectiveness and safety of protocolized sedation in the pediatric intensive care unit. Sedation practice has not been updated in the past 8 years, and 50% of patients who are admitted to the intensive care unit are ineffectively sedated. Inadequate sedation increases the risk of adverse events. As for the second project, I aim to plan an observational study about sleep and circadian rhythm in the pediatric intensive care unit. The objective of their observational study is to describe circadian rhythms and measure the quality and quantity of sleep in the pediatric intensive care unit using actigraphy. I also aim to investigate their impact on short- and long-term psychological outcomes.

AGE 26 years SUPERVISOR(S) Klára Horváth, Zsolt Molnár

**E-MAIL** ambrus.szemere@gmail.com

## **CSENGE ERZSÉBET** SZIGETVÁRY

SEMMELWEIS UNIVERSITY, DEPARTMENT OF ANAESTHESIOLOGY AND INTENSIVE THERAPY





#### PROJECT DESCRIPTION

I'm a recent medical school graduate from the University of Szeged and my main area of interest is anesthesiology. As my first project, I initiated a systematic review and meta-analysis on the effects of individualized vs. conventional positive end-expiratory pressure (PEEP) settings on perioperative outcomes in patients undergoing abdominal surgery. The clinical implication of my study is to improve perioperative oxygenation and reduce postoperative pulmonary complications. In addition, I am now preparing the establishment of a national and international patient registry on acute hypoxemic respiratory failure. Aiming to prospectively collect high-quality data on standards of care, procedures, and outcomes regarding the treatment of patients in Hungarian and international intensive care units. Lastly, I'm planning on a second meta-analysis about adjuvant hemoadsorption therapy in Acute Respiratory Distress Syndrome (ARDS).

AGE 27 years **SUPERVISOR(S)** Zsolt Molnár, Zoltán Ruszkai E-MAIL szigetvary.csenge@gmail.com

### **CANER** TURAN

SEMMELWEIS UNIVERSITY, ALUMNI DIRECTORATE





#### PROJECT DESCRIPTION

Caner's main area of interest is **intensive care medicine**. He is working on a **systematic review and meta-analysis** on the effects of preoperative steroid administration on intra- and postoperative outcomes in liver surgery patients who undergo liver surgery suffer from high rates of postoperative complications in which dysregulation immune response of the host plays a major role. In a **systematic review**, he aims to summarize the evidence on the use of hemadsorption therapy for patients with acute liver dysfunction. **Randomized trials are lacking**, hence in this systematic review, he aims to collect, analyze and report on all aspects of the current knowledge on hemadsorption therapy in this context. Lastly, **in a meta-analysis**, he aims to compare the effects of goal-directed fluid therapy (GDFT) versus conventional management on postoperative complications after major liver surgery.

AGE 28 years SUPERVISOR(S) Zsolt Molnár E-MAIL c.caner.turan@gmail.com



## MÁTYÁS VEZÉR

SEMMELWEIS UNIVERSITY, DEPARTMENT OF ORTHOPAEDICS





#### PROJECT DESCRIPTION

I am a toxicologist and emergency physician specialist at Szent György Hospital, Székesfehérvár, and National Ambulance Service and Hungarian Air Ambulance. My first project is a systematic review and meta-analysis about the added value of Point of Care Ultrasound (PoCUS) use in the management of patients admitted with acute dyspnoea. My main objective is to examine whether PoCUS usage added to conventional modalities improves clinical outcomes in patients with acute onset dyspnoea. For the second project, I am conducting a systematic review comparing the efficacy of 0.9 % NaCl versus balanced electrolyte solutions in resolving diabetic ketoacidosis (DKA) in adults. Evidence is still controversial on this topic; therefore, I aim to perform a review of all published studies in the field and provide further evidence regarding the best type of fluid for resuscitation in DKA. I planned my third project to evaluate the effect of prehospital red blood cell transfusion in bleeding patients.

AGE 28 years SUPERVISOR(S) Tamás Terebessy E-MAIL drvezermatyas@gmail.com

# GROUP 6 ORTHOPEDICS & TRAUMATOLOGY

### GROUP 6 ORTHOPEDICS & TRAUMATOLOGY

GROUP MEETINGS

WEDNESDAY, 4 PM - 6:30 PM

#### **INTRODUCTION TO THE GROUP**

The Orthopedics and Traumatology group has 10 students, six of them from the field of orthopedics and four from traumatology. Among the students, there are experienced surgeons as well as young doctors at the beginning of their careers. The members have various interests, such as child orthopedics, hip and knee arthroplasty, and shoulder, hand, and foot surgery. Topics incorporate short- and long-term follow-ups with patients to determine the best operative techniques, diagnostic accuracy studies, methods to reduce perioperative infections, and comparison of different non-operative techniques for knee or shoulder conditions. Although the areas of research differ greatly, cooperation and interest in each other's projects characterize the team. The group is planning to complete 17 meta-analyses, three registry analyses, two prospective cohort analyses, two network meta-analyses, and one clinical trial. In the upcoming years, they also plan to launch an international registry for complete knee arthroplasty. As members of the group, several project students help the researchers and are also learning the basics of quality research through the program of the Center of Translational Medicine. The leaders of the group are Professor László Hangody and Professor György Szőke, internationally renowned experts in their fields. Professor Hangody's main interests are cartilage lesions, their repair, and the ligamentous lesions of the knee. Professor Szőke's field of interest is child orthopedics, with a special focus on congenital hip dysplasia, ICP, and limb length difference. Group SMS is Szilárd Váncsa.

#### MEMBERS OF THE GROUP



GYÖRGY SZŐKE Group Leader



**LÁSZLÓ HANGODY** Group Leader



SZILÁRD VÁNCSA Scientific Methodology Supervisor



**GERGELY AGÓCS** Statistician

**STUDENTS:** Robert de Jonge , Gyula Domos, Luca Hergár, Koppány Péter Kocsis, Krisztián Balázs Kovács, Miklós Máté, Bence Stubnya, Gyula Ferenc Szőcs, Csaba Varga, Viktor Weninger

**SUPERVISORS:** Zoltán Bejek, György Márk Hangody, László Hangody, Judit Réka Hetthéssy, Gergely Holnapy, György Kocsis, Károly Pap, Gergely Pánics, Gábor Skaliczki, Imre Szerb, György Szőke

### **ROBERT** DE JONGE

SEMMELWEIS UNIVERSITY, DEPARTMENT OF TRAUMATOLOGY





#### PROJECT DESCRIPTION

I am an orthopedic-traumatologist resident at the Uzsoki Street Hospital, Semmelweis University. Currently, I am working on a systematic review and meta-analysis regarding anterior cruciate ligament (ACL) injuries and investigates the osteoarthritic evolutions after ACL injury and reconstruction. My aim is to find the best practice to prevent osteoarthritis in patients with isolated ACL rupture. For my second project I will be doing a prospective observational follow-up study, where I will analyze injured and contralateral healthy knees on the aspect of developing early-onset of post-traumatic osteoarthritis. I intend to compare ACL reconstruction with lateral extra-articular tenodesis with reconstruction alone. Meanwhile I am also involved in the traumatology education as a member of the Semmelweis University, Department of Traumatology.

AGE 28 years **SUPERVISOR(S)** Gergely Pánics, László Hangody E-MAIL dejongerobi@gmail.com

### **GYULA DOMOS** SEMMELWEIS UNIVERSITY, DEPARTMENT OF ORTHOPAEDICS





#### PROJECT DESCRIPTION

I am a pediatric orthopedic surgeon and participant in the PhD fellowship program. My research topic is congenital hip dislocation, and he is currently working on a meta-analysis evaluating the risk factors of failure in the treatment of developmental dysplasia of the hip. I am evaluating all treatment options and the results could help decreasing the rate of unnecessary interventions and complications. As my second project I chose a retrospective analysis of the primary complex surgical treatment of hip dislocation after failed conservative treatment and in late presented cases performed at his department. I would like to summarize the unique surgical techniques that have been used at their department the past 12 years.

**AGE** 44 years SUPERVISOR(S) György Szőke E-MAIL domosgy@gmail.com

## **LUCA** HERGÁR

SEMMELWEIS UNIVERSITY, DEPARTMENT OF ORTHOPAEDICS





#### PROJECT DESCRIPTION

I am a resident doctor in orthopedics and traumatology and is participating in the Translational Medicine PhD program, with an interest is hand surgery. Connected to this topic, I am currently working on two systematic reviews and meta-analysis, and an observational study. In one of the meta-analyses, I intend to investigate the diagnostic performance of magnetic resonance imaging in the case of wrist cartilaginous and ligamentous lesions. The diagnostic accuracy of MRI in these lesions ranges on a large scale, therefore I aim to clarify the differences between the studies. My second meta-analysis is about the correct clinical evaluation of two-point discrimination results of the hand. I am also planing to start an international study, examining the role of two-point discrimination in the diagnosis of upper limb tunnel syndromes.

AGE 27 years **SUPERVISOR(S)** Judit Réka Hetthéssy E-MAIL luca.hergar@gmail.com

#### **KOPPÁNY PÉTER KOCSIS** SEMMELWEIS UNIVERSITY, DEPARTMENT OF TRAUMATOLOGY





#### PROJECT DESCRIPTION

I am a specialist in orthopedic traumatology at Uzsoki Hospital, Orthopaedic, and Trauma Department. Currently working on a systematic review and meta-analysis regarding the diagnostic accuracy of ultrasonography in the soft tissue injury of the ankle. I hypothesize that an ultrasound scan is non-inferior to magnetic resonance imaging for soft tissue injuries of the ankle. My second project will be a diagnostic accuracy network meta-analysis about the medial collateral ligament injury of the knee. Based on these results, ultrasound scans could be used as a cheap, easily accessible alternative. Since there is a lack of direct comparisons between ultrasound and MRI for the diagnosis of knee injuries, as my third project, he aims to initiate a clinical trial to compare these two imaging methods. Lastly, I take part in the education of orthopedics and traumatology for medical students.

**AGE** 37 years **SUPERVISOR(S)** Károly Pap E-MAIL koppany.kocsis@gmail.com

#### **KRISZTIÁN BALÁZS KOVÁCS** SEMMELWEIS UNIVERSITY, DEPARTMENT OF ORTHOPAEDICS





#### PROJECT DESCRIPTION

My interest is in orthopedics and traumatology, and I am working as a resident at the Department of Orthopedics, Semmelweis University. I am currently working on a systematic review and meta-analysis investigating the impact of different factors influencing the accuracy of in vitro Young's moduli results. My study could help in the prosthesis design in orthopedics. My second project is to summarize in a descriptive study the results of LockDown Surgical Technique in Hungary and make a second meta-analysis and retrospective study comparing the efficacy of LockDown technique to other surgical approaches used in acromioclavicular instabilities. I am intended to contact orthopedic surgeons in Hungary who already performed operations with the LockDown technique, and he will apply for a retrospective national ethical approval.

AGE 33 years SUPERVISOR(S) György Kocsis E-MAIL dr.kovacs.ortop@gmail.com

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MIKLÓS MÁTÉ SEMMELWEIS UNIVERSITY, DEPARTMENT OF TRAUMATOLOGY





#### PROJECT DESCRIPTION

I am an orthopedic-traumatologist resident at the Uzsoki Street Hospital Semmelweis University. I am working on a systematic review and meta-analysis of anterior cruciate ligament injuries. I am comparing surgical and conservative treatments and investigates the short-term osteoarthritic evolutions after an ACL injury. My second project will be a prospective observational study on the early signs of posttraumatic osteoarthritis after an isolated anterior cruciate ligament tear. I plan to do a follow-up study of patients undergoing isolated ACL injury and he intends to follow the patients after surgery with magnetic resonance imaging. I would compare the injured and contralateral healthy knee on the aspect of developing early-onset osteoarthritis. I also take part in traumatology education as a member of Semmelweis University, Department of Traumatology.

**AGE** 29 years **SUPERVISOR(S)** Gergely Pánics, László Hangody E-MAIL drmatemiklos@gmail.com

## **BENCE** STUBNYA

SEMMELWEIS UNIVERSITY, DEPARTMENT OF ORTHOPAEDICS





#### PROJECT DESCRIPTION

I am not only an orthopedic and traumatology resident at Semmelweis University, but also a PhD researcher in total knee replacement therapy. I am doing a systematic review and network meta-analysis about comparing different surgical approaches in total knee arthroplasty. My study could help in the effectiveness of rehabilitation after total knee arthroplasty. I also run a clinical trial on the comparison of the subvastus and other approaches in total knee arthroplasty focusing on clinical outcomes. Lastly, I plan to start a total knee arthroplasty patient registry in the future. I am taking an active part in the university's brightly developing future, and not only won the 2021 Semmelweis Innovation Award but in addition, I am currently the president of the Doctoral Student's Union.

AGE 27 years SUPERVISOR(S) Zoltán Bajek E-MAIL bence@stubnya.hu

#### **GYULA FERENC SZŐCS** SEMMELWEIS UNIVERSITY, DEPARTMENT OF TRAUMATOLOGY





#### PROJECT DESCRIPTION

I am a resident orthopedic-traumatologist at Uzsoki Hospital, Orthopaedic and Trauma Department. I am writing a meta-analysis regarding the treatment of concomitant anterior cruciate ligament and meniscal injury, investigating whether meniscectomy or meniscal repair leads to better outcomes during primary anterior cruciate ligament reconstruction. The results could help to increase the stability of the knee joint after ACL reconstruction, as well as help with decision making for orthopedics. My second project is also a systematic review and meta-analysis of intraarticular injections in the treatment of knee osteoarthritis. In my second project, I aim to investigate the efficacy and safety of different intra-articular injection therapies, like hyaluronic acid, platelet-rich plasma, corticosteroids, etc. Lastly, I take part in the education of traumatology for medical students at Semmelweis University Traumatology Department.

AGE 31 years SUPERVISOR(S) György Márk Hangody E-MAIL szocs.gyulaferenc@gmail.com

### **CSABA** VARGA

SEMMELWEIS UNIVERSITY, DEPARTMENT OF ORTHOPAEDICS





#### PROJECT DESCRIPTION

I am a specialist in orthopedics, currently working on a meta-analysis assessing the operative techniques for the treatment of adult flatfoot. Specialists use plenty of types of surgical methods in each stage of adult flatfoot, this study helps to clarify the differences between the effects of the operation types. The annual prevalence of ankle prosthesis increases worldwide but the role of risk factors is still unclear. Therefore, my second project is a meta-analysis about the efficacy and safety of total ankle replacement in relation to body mass index.

AGE 35 years SUPERVISOR(S) Gergely Holnapy E-MAIL dr.vargacsaba001@gmail.com

#### VIKTOR WENINGER SEMMELWEIS UNIVERSITY, DEPARTMENT OF ORTHOPAEDICS





#### PROJECT DESCRIPTION

I am a resident working at the Orthopaedic and Traumatology Department at Semmelweis University with a main interest in shoulder injury. Currently I am working on a systematic review and network meta-analysis on the comparison of the safety and efficacy of different injection therapies for partial rotator cuff tears. My study will help clinicians in the choice of the most efficacious and safe therapy. The second project is another systematic review on the investigation of the efficacy of peroxide skin preparation for the reduction of Cutibacterium acnes on the skin around the shoulder joint. I also take part in orthopedics education as a member of the Department of Orthopedics.

**AGE** 29 years SUPERVISOR(S) Gábor Skaliczki E-MAIL weningerviktor@yahoo.com

# GROUP 7 **PEDIATRICS**

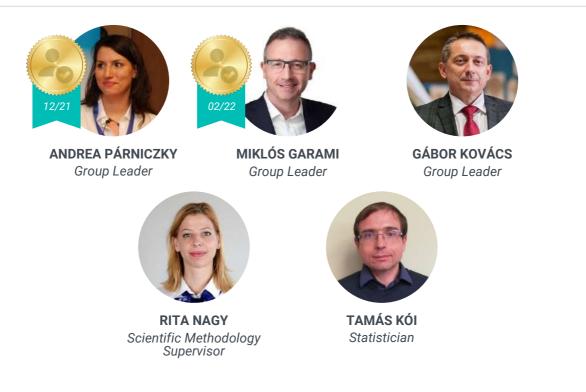


#### **INTRODUCTION TO THE GROUP**



The 13 participants of the pediatric group are PhD students coming from the Heim Pál National Pediatric Institute, 1st, and 2nd Department of Pediatrics at Semmelweis University. Three of the students started their residency and PhD this September, however, the majority already have a few years of clinical experience. The main research topics they are working on are cystic fibrosis, neonatology, COVID-19, oncology, and IBD. Besides pediatric departments, students are also coming from the Faculty of Health Science, András Petho Faculty, and the Department of Forensic Medicine. First, every project group started its meta-analysis to research their field of interest. For second projects, registry and clinical trial analysis or initiations, and basic research studies are planned. The group leaders are Andrea Párniczky, Professor Miklós Garami, and Professor Gábor Kovács. All of them are Pediatric specialty doctors. Professor Kovács is the head of the department at the 2nd Department of Pediatrics, Semmelweis University, while Professor Garami is the head of neuro-oncology at the department. The group SMS is Rita Nagy.

#### **MEMBERS OF THE GROUP**



**STUDENTS:** Dorina Rita Bajzát, Adrienn Krisztina Ferencsikné Kéri, Réka Garai, Márk Viktor Hernádfői, Zita Hornok, Ágoston Jánosi, Dóra Kornélia Koch, Kinga Kovács, Adrienn Anna Lukács, Vanda Máté, Péter Misnyovszki, Márk Pulay, Nóra Zimonyi

**SUPERVISORS:** Tamás Cserni, Viktor Dombrádi, Éva Feketené Szabó, Andrea Ferencz, Péter Gaál, Miklós Garami, Ákos Gasparics, Mónika Horváth, Gábor Kovács, Péter Krivácsy, Boglárka Marcs, Katalin Müller, Andrea Párniczky, Attila Szabó, Miklós Szabó, Klára Törő, Ibolya Túri



#### **DORINA RITA BAJZÁT** HEIM PÁL NATIONAL PEDIATRIC INSTITUTE





#### PROJECT DESCRIPTION

I am a recent medical school graduate, and my field of interest is pediatric medicine. My first project is a systematic review and metaanalysis on the effect of preoperative anti-TNF-alpha therapy on postoperative complications in pediatric irritable bowel disease. Concern was raised that by modulating the immune response, anti-TNF-alpha may increase surgical site infections and morbidity. The result of the meta-analysis will help the physician with operation schedules. As my second project I chose a registry analysis of intestinal resections in pediatric Crohn's disease. It is a nationwide survey based on the Hungarian Pediatric IBD Registry. This multicenter, retrospective cohort study aims to analyze the surgical interventions among Hungarian children with IBD based on HUPIR. We would like to assess the rate of surgical interventions after diagnosis, identify predictor factors for the first surgery, and prognostic factors that increase the rate of postoperative complications and recurrences.

AGE 26 years **SUPERVISOR(S)** Katalin Müller E-MAIL bajzat.dorka96@gmail.com

ADRIENN KRISZTINA FERENCSIKNÉ KÉRI





#### PROJECT DESCRIPTION

I am a third-year pediatric resident in Heim Pál National Pediatric Insitute. I am focusing on the endocrine pancreatic insufficiency in cystic fibrosis (CF). In my meta-analysis, I aim is to assess the prevalence of abnormal glucose tolerance (AGT) in different age groups. Based on the results, guidelines on CF could be reconsidered and early treatment of abnormal glucose tolerance could be initiated. Regarding my second project, I am planning to perform a registry analysis investigating the prevalence of AGT in children with CF analyzing the dataset of the ongoing longitudinal, prospective Cystic Fibrosis-related Pancreatic Disorders Registry (CFRPDR). In the registry, there is a yearly follow of CF patients, while they are assessing the patient's carbohydrate homeostasis, clinical status, and collecting biomedical samples. This analysis aims to earn knowledge about the dynamics of the progression in glucose tolerance status.

AGE 29 years **SUPERVISOR(S)** Andrea Párniczky E-MAIL adrikeri@gmail.com

## **RÉKA GARAI**

SEMMELWEIS UNIVERSITY, FIRST DEPARTMENT OF PAEDIATRICS





#### PROJECT DESCRIPTION

My research interests include child-friendly medical techniques and COVID-19-related conditions. In the first year of my PhD training, I performed a meta-analysis and systematic review evaluating the effectiveness, safety, and cost-effectiveness of the live attenuated influenza vaccine compared to injectable form in children, as the administration of a pain-free nasal vaccine might be more favorable resulting in higher vaccination rates. I also did a registry analysis investigating the medical characteristics of pediatric long COVID syndrome. Currently I am working on the investigation of COVID-19-related thyroid abnormalities in children with Vivien Herczeg, which is the next analysis of their Hungarian Pediatric Long COVID registry.

AGE 30 years **SUPERVISOR(S)** Attila Szabó, Péter Krivácsy E-MAIL garai.reka@med.semmelweis-univ.hu

#### MÁRK VIKTOR HERNÁDFŐI SEMMELWEIS UNIVERSITY, SECOND DEPARTMENT OF PAEDIATRICS





#### PROJECT DESCRIPTION

I am a recent medical school graduate, and my primary interest is in pediatric oncology and hematology. Currently I am working on a systematic review and meta-analysis comparing social and economic outcomes between former childhood cancer patients and the general population. With the developments of the last decades, 8 out of 10 pediatric oncology patients can be cured. Therefore, the greater the focus on the success of therapy the better the reintegration of the patient into society. My second project will be a network meta-analysis about the comparison of the effectiveness of different therapeutical approaches in the treatment neuroblastoma. Neuroblastoma is the most common cancer in infants and extracranial solid tumor in children. There are several therapeutical approaches to improve survival (especially in high-risk groups), but there is a lack of information about which therapy is superior to the others.

AGE 28 years **SUPERVISOR(S)** Miklós Garami

E-MAIL hernadfoi.mark@gmail.com

#### **ÁGOSTON JÁNOSI** HEIM PÁL NATIONAL PEDIATRIC INSTITUTE





#### PROJECT DESCRIPTION

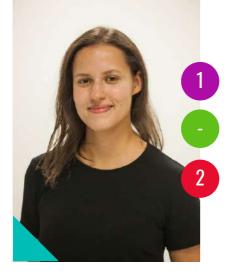
My main research topic is COVID-19 in the field of pediatric medicine. I am working on a systematic review and meta-analysis investigating the prevalence of asymptomatic COVID-19 in different pediatric age groups. Children are likely to have a higher proportion of asymptomatic infection than adults, therefore his aim is to create proposals and recommendations for protective measures in children regarding COVID-19. My second study is about the effectiveness and safety of TNF-alpha inhibitors in COVID-19 therapy. My meta-analysis may improve COVID-19 survival. As my third project I chose a registry analysis of the characterization of COVID-19 in Hungarian children, with the intention analyze 507 prospectively collected COVID-19 patients' data. The registry ensures the opportunity to research the epidemiology, diagnosis, treatment, complication, and genetic background of SARS-CoV-2 disease.

AGE 28 years

**SUPERVISOR(S)** Andrea Párniczky E-MAIL janosi.agoston@gmail.com

#### **DÓRA KORNÉLIA KOCH** SEMMELWEIS UNIVERSITY, SECOND DEPARTMENT OF PAEDIATRICS





#### PROJECT DESCRIPTION

I'm a newly graduated medical doctor, and my research area is pediatric hematology and oncology. I was working on a systematic review and meta-analysis, comparing the toxicity levels between bolus injection and long-term vincristine infusion in patients with malignancies. Previously it has been shown that different chemotherapeutic agents have the same effectiveness when administered in long-term infusions but may have fewer adverse effects. My second project is a clinical trial with the same question as in her meta-analysis. There is a lack of data regarding the comparison of bolus injection and long-term vincristine infusion. We aim to evaluate the severity of adverse events in two different dosing schedules (bolus injection vs. 180 min infusion) of vincristine-sulfate administration in children with hematologic malignancies.

**AGE** 26 years SUPERVISOR(S) Gábor Kovács E-MAIL dorakorneliakoch@gmail.com

## KINGA KOVÁCS

SEMMELWEIS UNIVERSITY, DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY





#### PROJECT DESCRIPTION

I am a pediatric resident at the 1st Department of Obstetrics and Gynecology and my main area of interest is neonatology. As my first project, I conduct a systematic review and meta-analysis to assess the role of the histopathologic fetal inflammatory response in developing adverse outcomes in premature neonates. Thus, evaluating its role as a prognostic factor in neonatal intensive care. As a second project, I intend to conduct a systematic review and meta-analysis on the dose of caffeine citrate loading before extubation. Lastly, my intention is to conduct a randomized clinical trial on the same topic and write a pre-study protocol. The results of these studies could lead to the reduction of extubation failure within the 48 hours.

AGE 27 years

**SUPERVISOR(S)** Ákos Gasparics E-MAIL kingakovacs3@gmail.com

#### **ADRIENN ANNA LUKÁCS** SEMMELWEIS UNIVERSITY, FACULTY OF HEALTH SCIENCES





#### PROJECT DESCRIPTION

I am a certified physiotherapist, with my main research area being the Multisystem Inflammatory Syndrome in Children (MIS-C). Currently I am working on a meta-analysis investigating the prevalence and characteristics of cardiovascular abnormalities in COVID-19-associated Multisystem Inflammatory Syndrome in Children. I also work on a registry analysis to assess the possible long-term impact of MIS-C on these children's physical performance. My results can lead to a better understanding and greater physiotherapeutic care. My last project is an international survey research investigating the inpatient and outpatient physiotherapeutic care in COVID-19-associated Multisystem Inflammatory Syndrome in Children. This cross-sectional survey aims to assess the Hungarian and international physiotherapeutic care of MIS-C and to identify its similarities and discrepancies among hospitals and therapists.

**AGE** 25 years **SUPERVISOR(S)** Mónika Horváth **E-MAIL** lukacsadriennanna@gmail.com



SEMMELWEIS UNIVERSITY, FIRST DEPARTMENT OF PAEDIATRICS





#### PROJECT DESCRIPTION

I am a senior pediatric resident working at the 1st Department of Pediatrics. My field of interest is pediatric oncology, more specifically precision oncology, and immunotherapies, in which she completed two courses at Harvard Medical School.

My current research plan includes a systematic review and metaanalysis about pediatric precision oncology treatments and a comparative analysis of diffuse intrinsic pontine glioma treatments. The long-term goals include planning and conducting clinical research in the field of precision oncology, from diagnostics to drug delivery (eg. therapeutic drug monitoring) in the neurooncology workgroup led by Professor Miklós Garami, my supervisor at the 2nd Department of Pediatrics. As a senior methodological supervisor, my aim is to help incoming PhD students in the Pediatrics group by sharing my expertise both in methodology and in the field of Pediatrics.

AGE 29 years

SUPERVISOR(S) Miklós Garami

**E-MAIL** dr.mate.vanda@gmail.com

## PÉTER MISNYOVSZKI

SEMMELWEIS UNIVERSITY, DEPARTMENT OF FORENSIC MEDICINE





#### PROJECT DESCRIPTION

I am working at the Department of Pathology, Forensic and Insurance Medicine at Semmelweis University. My main area of interest is forensic radiology. Therefore, I am currently working on a systematic review and meta-analysis on the diagnostic accuracy of postmortem imaging techniques, like postmortem magnetic resonance imaging or computed tomography scan compared to the gold standard autopsy. Imaging methods could represent a less time-consuming method while avoiding any major alterations to the deceased. As a second project, I am planning to conduct a registry analysis, investigating the possible association between the incidence of suicidal death cases and environmental factors, like changes in humidity or air pressure. I hypothesize that the change in a meteorological factor like temperature, air pressure, etc., shows association with the incidence of suicidal death cases.

AGE 30 years

SUPERVISOR(S) Klára Törő, Boglárka Marcsa

**E-MAIL** misnyovszki.peter@med.semmelweis-univ.hu

## MÁRK PULAY

SEMMELWEIS UNIVERSITY, ANDRÁS PETŐ PRACTICE PRIMARY SCHOOL





#### PROJECT DESCRIPTION

I work at the András Pető Faculty as a conductor-teacher and my special field is the rehabilitation of patients with cerebral palsy (CP). I am working on a systematic review and meta-analysis about the effect of additional whole-body vibration therapy in CP patients. Based on my results whole-body vibration therapy could be considered for inclusion in conventional rehabilitation programs. I also participate in a pilot of a randomized clinical trial in collaboration with the Faculty of Health Sciences in which he investigates the beneficial effect of electromagnetic therapy in the same patient population. My intention is to write the pre-study protocol of a randomized clinical trial. His results could update the possibilities of rehabilitation programs for CP patients.

**AGE** 35 SUPERVISOR(S) Éva Feketené Szabó, Ibolya Túri

E-MAIL markpulay@gmail.com

#### NÓRA ZIMONYI SEMMELWEIS UNIVERSITY, ANDRÁS PETŐ PRACTICE PRIMARY SCHOOL





#### PROJECT DESCRIPTION

I am a conductor-teacher working at András Pető Faculty at Semmelweis University. I am conducting a meta-analysis investigating the executive functions and evaluating the different executive function test results among the cerebral palsy population, thus identifying the most affected aspects. My second project is a clinical trial comparing executive function test scores between children with cerebral palsy and typically developing children and examining the extent of their disadvantage and how much the different components of executive function skills are affected. The results will be important in designing a more targeted development program.

**AGE** 36 **SUPERVISOR(S)** Péter Gaál, Ibolya Túri, Viktor Dombrádi

## GROUP 8 GASTROENTEROLOGY & ENDOCRINOLOGY

# GROUP 8 GASTROENTEROLOGY & ENDOCRINOLOGY

GROUP MEETINGS TURSDAY, 5 PM - 7:30 PM

#### **INTRODUCTION TO THE GROUP**



The Gastroenterology & Endocrinology group has nine PhD students. There are four medical doctors at the beginning of their careers, and one student is a gastroenterology specialist. There are also two dietitians and two psychologists in the group. The group also included two international students. The research topics are quite diverse due to the interdisciplinary areas that the group represents; including several investigations in pancreatic diseases, gastrointestinal bleeding, diabetes, microscopic colitis, probiotics, and the role of psychological care in clinical practice. All students perform a meta-analysis as their first project, and since most of the students plan to carry out a second one, the number of meta-analyses added up to 16. Among the second projects, there are registry analyses, registry establishments, writing randomized-controlled study protocols, and creating international surveys. Within the group, there are also nine project students facilitating the progress of the PhD student's projects. The group leaders are Bálint Erőss and Professor Nóra Hosszúfalusi, two highly qualified physicians. One of the Scientific Methodology Supervisors is Brigitta Teutsch, who is a third-year PhD student at University of Pécs.

#### **MEMBERS OF THE GROUP**



**BÁLINT ERŐSS** Group Leader



NÓRA HOSSZÚFALUSI Group Leader



BRIGITTA TEUTSCH Scientific Methodology Supervisor



**DÁNIEL VERES** Statistician

**STUDENTS:** Sára Bognár, Anna Júlia Éliás, Marie Anne Engh, Beatrix Fogarasi, Adrienn Nikolett Kovács, Mahmoud Obeidat, Anna Noémi Németh, Dániel Pálinkás, Cristina Patoni, Anett Rancz, Olga Julia Zahariev

SUPERVISORS: László Földvári-Nagy, Bálint Erőss, Nóra Hosszúfalusi, Péter Hegyi, Péter Jenő Hegyi, Márk Félix Juhász, Katalin Márta, Emese Mihály, Klementina Ocskay

## SÁRA BOGNÁR

SEMMELWEIS UNIVERSITY, CENTRE FOR PANCREATIC DISEASES





#### PROJECT DESCRIPTION

I am a certified psychologist currently working at the Department of Pancreatic Diseases at the Transplant Clinic of Semmelweis University. My main area of research is the psychological burden on patients with cancer. As my first project I decided it to a systematic review and meta-analysis investigating the effect of psychological interventions on the quality of life and survival rate within cancer patients. The results of the study could help to achieve an improved quality of life for cancer patients, but also to achieve prolonged survival in some of the cancer cases. My second project is a prevalence meta-analysis, where I aim to identify the psychological burden on patients with pancreatic cancer.

**AGE** 32

AGE

27

**SUPERVISOR(S)** Péter Hegyi, Katalin Márta E-MAIL bognar.sara@gmail.com

#### ANNA JÚLIA ÉLIÁS SEMMELWEIS UNIVERSITY, FACULTY OF HEALTH SCIENCES





#### PROJECT DESCRIPTION

I am a dietitian, who obtained her bachelor's degree in Nutrition at Semmelweis University Faculty of Health Sciences. The main area of my research is the human gut microbiome. Regarding my projects they will consist of two systematic reviews and meta-analysis. One of them investigates the role of probiotics in antibiotics-associated dysbiosis. The results of my research could help in the evidencebased recommendations on the administration of probiotics for the post-antibiotic recovery of the microbiome. My second metaanalysis focuses on the effect of probiotic supplementation in a generally healthy population. Besides, I am planning a randomized controlled trial to further investigate the possible methods for safely influencing the composition of the gut microbial community.

**SUPERVISOR(S)** Katalin Lenti, László Földvári-Nagy E-MAIL elias.anna.julia@gmail.com



## MARIE ANNE ENGH

SEMMELWEIS UNIVERSITY, CENTRE FOR TRANSLATIONAL MEDICINE





#### PROJECT DESCRIPTION

Engh Marie Anne is a newly-graduated medical doctor and her main interest is in gastroenterology. She has performed a systematic review and meta-analysis regarding the prevalence of gastrointestinal bleeding in pancreatitis. She started this project before the Translational Medicine PhD program as a project student and she has already finished her manuscript. Her second project is a network meta-analysis regarding the efficacy of different needles used for endoscopic ultrasound-guided tissue acquisition of pancreatic masses. Her last project will be a third meta-analysis examining the use of contrast-enhanced endoscopic ultrasound during tissue acquisition of pancreatic masses. Both studies aim to improve the diagnostic process during tissue acquisition in the pancreas, aiding clinicians in choosing equipment, decreasing the risk of re-intervention, and the need for costly processes.

**AGE** 28 SUPERVISOR(S) Bálint Erőss E-MAIL marieaengh@gmail.com

**BEATRIX FOGARASI** SEMMELWEIS UNIVERSITY, CENTRE FOR PANCREATIC DISEASES





#### PROJECT DESCRIPTION

I am a certified psychologist taking part in vocational training in health psychology. My PhD thesis and main research areas are the psychological interventions during hospital care, focusing primarily on patients with acute pancreatitis, chronic pancreatitis, and pancreatic cancer. I am working on a meta-analysis evaluating the efficacy and safety of various psychological interventions in patients with inflammatory digestive system diseases. My results could aid the improvement of the quality of patient care. As my second project I chose the topic of cessation programs for smoking and alcohol consumption. I will also be a co-investigator and will provide the brief interventions in the REAPPEAR trial (Recurrent Acute Pancreatitis Prevention by the Elimination of Alcohol and Cigarette Smoking), which is a multicentric, international, parallel randomized controlled trial, designed by the Centre for Translational Medicine.

AGESUPERVISOR(S)26Péter Hegyi, Klementina Ocskay

E-MAIL fogarasi.beatrix@gmail.com



## **ADRIENN ANNA** KOVÁCS

SEMMELWEIS UNIVERSITY, DEPARTMENT OF INTERNAL MEDICINE AND HAEMATOLOGY





#### PROJECT DESCRIPTION

I am an internal medicine resident participating in a clinical PhD fellowship program. My focus of interest is ketosis-prone type 2 diabetes mellitus, with my first project being a systematic review and a meta-analysis assessing the prevalence and the clinical characteristics of ketosis-prone type 2 diabetes was finalized and submitted to the target journal in September 2022. My second project is a long-term follow-up study of Hungarian patients with new-onset diabetes mellitus presenting with ketosis. The focus of the second study is to assess the prevalence of ketosis-prone type 2 diabetes among Caucasian patients and to compare its clinical characteristics to adult-onset type 1 and non-ketotic type 2 diabetes.

**AGE** 29

SUPERVISOR(S) Nóra Hosszúfalusi E-MAIL kov.adri15@gmail.com

#### **MAHMOUD OBEIDAT** UNVERSITY OF PÉCS, INSTITUTE FOR TRANSLATIONAL MEDICINE





#### PROJECT DESCRIPTION

I am a newly graduated gastroenterologist with an interest in Gastroenterology, especially gastrointestinal bleeding (GIB). My first project will be a systematic review and meta-analysis of the proportion rates of hemodynamic instability and shock in patients with gastrointestinal bleeding based on the source of bleeding. This study could help to better understand the characteristics and assess the exact proportions of hemodynamically unstable/shocked patients in GIB. I also plan to establish a European Survey to understand the stepwise management, targeting hemodynamically unstable patients with non-variceal upper gastrointestinal bleeding. For this project, I will create a questionnaire in different languages and send it out to as many hospitals and doctors as possible to have a better insight into the assessment of that population.

**AGE** 26

SUPERVISOR(S) Bálint Erőss E-MAIL obeidat.mahmoud96@gmail.com



## DÁNIEL PÁLINKÁS

HUNGARIAN ARMY MEDICAL CENTRE, DEPARTMENT OF GASTROENTEROLOGY





#### PROJECT DESCRIPTION

The topic of my thesis is "The proper way of anticoagulation after gastrointestinal bleeding". As my first project, I was working on a meta-analysis, assessing the risk and benefit of direct oral anticoagulants (DOACs) resumption after a gastrointestinal bleeding (GIB) episode. My results will help clinicians in the decision of restarting anticoagulant therapy after GIB, avoiding thromboembolic events due to the lack of anticoagulation. The lack of high-quality data on this topic inspired me to compose a protocol for a randomized clinical trial (TIME-TO study). This study could aid clinicians to determine the ideal timing of DOACs resumption by patients following a gastrointestinal bleeding Registry in the Department of Gastroenterology, Military Hospital Hungarian Defence Forces, where I work as a gastroenterologist.

**AGE** 35 SUPERVISOR(S) Bálint Erőss E-MAIL dr.d.palinkas@gmail.com

ANETT RANCZ SEMMELWEIS UNIVERSITY, CENTRE FOR TRANSLATIONAL MEDICINE





#### PROJECT DESCRIPTION

I am a recent medical school graduate, and her main field of interest is microscopic colitis (MC). In my first project, I will assess the prevalence of low bone density and osteoporosis in patients with MC through a systematic review and meta-analysis. The results of this study could help to decide whether screening is necessary for the diagnosis. My second project is also a systematic review and metaanalysis, focusing on the risk factors of microscopic colitis. I plan to collect all the data regarding lifestyle factors (e.g., smoking, alcohol consumption) and medications (e.g., nonsteroidal anti-inflammatory drugs, proton pump inhibitors, and selective serotonin reuptake inhibitors), which may contribute to the development of this disease.

**AGE** 27 SUPERVISOR(S) Emese Mihály E-MAIL ranczanett@gmail.com



## OLGA JULIA ZAHARIEV

SEMMELWEIS UNIVERSITY, CENTRE FOR PANCREATIC DISEASES





#### PROJECT DESCRIPTION

As a clinical dietitian in the Pancreatic Disease Ward at Semmelweis University my main field of research is the new onset diabetes following acute pancreatitis. My first project is a prognostic metaanalysis to identify patients who are at risk of developing diabetes mellitus after acute pancreatitis. The second project – a network meta-analysis, will look at effectiveness of lifestyle interventions on preventing or delaying diabetes in the general population. Furthermore, I am planning a clinical trial on the efficacy of lifestyle interventions on diabetes prevention in patients who had acute pancreatitis. I am also a co-investigator and head dietary coordinator of the EFFORT clinical trial which evaluates effect of dietary fat restriction after acute pancreatitis on pancreatitis recurrence rate.

**AGE** 28 **SUPERVISOR(S)** Péter Hegyi, Márk Félix Juhász E-MAIL olga.zahariev@gmail.com

# JJ X + E FREETINE ACTIVITIES





As one of our goals to create a great work environment we have been organizing multiple events to gather the medical staff together outside of work. Firstly, social clubs are continuously being organized and past events are including Halloween parties where staff members were able to bring their guests and enjoy a costume party. During this event finger food and drinks were provided to make the party more joyful as well as to help create a spooky theme.

To stick with costume parties, we also have been organizing a Gatsby event where the CTM members were able to attend the party of a lifetime, "Party Like Gatsby". This throwback party took place in the Cactus Juice Bar, where the dress code was strictly from the mid-1920s to create an accurate environment of that age. Other social club events included gatherings that took place at "The Grund", more specifically as our centre has reached the end of the 3rd Progress Report staff members were invited to celebrate the success of the CTM over some drinks and snacks. Another popular event that has been organized was the annual Christmas party where staff members along with their partners were welcomed to attend and celebrate a wonderful holiday together along with the always nicely provided food and drinks. This event also served as an opportunity to clink their glasses for the 4 month anniversary of the Central of Translational Medicine.









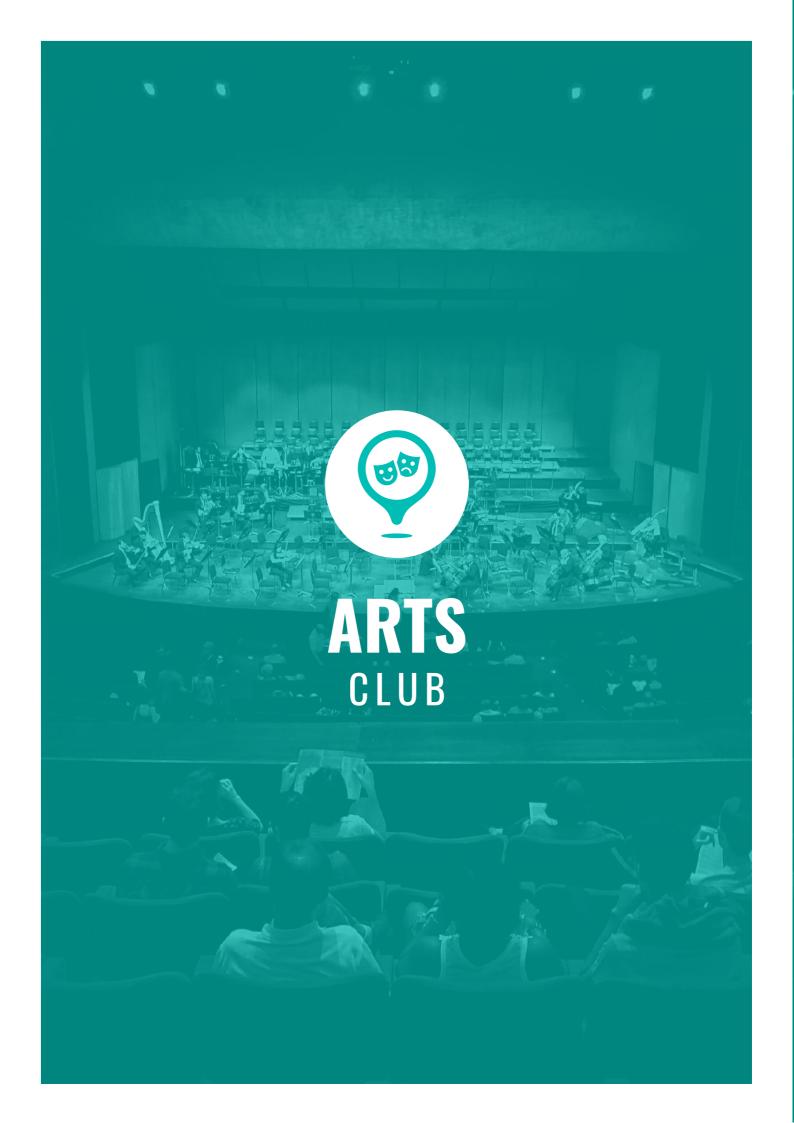














This club is purposely made to hold a more cultural base for gathering opportunities. The focus of these events is to bring the staff members closer by organizing other events. The Opera House has always provided a great opportunity for the members to enjoy each other's company alongside a great show. Just like opera theatre has been also another place for the CTM members to gather together and enjoy more cultural activities.





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# EXAMPLE TO A CLUB



As healthcare professionals, we also like to organize activities such as running together where always plan out a route before the meet customized for the preference of our members allowing them either run together or have different groups following their own pace. Another great bonding activity is going on hikes together. It is something that has been mostly enjoyed by our staff who get to attend a hike in a new area at every event.









## **DEFENDED** PHD STUDENTS





Following the launch of TM in Hungary in 2016, **25 PhD thesis** was carried out with the interdisciplinary support of CTM.

Among them, those who participated in our hybrid in-house training were labelled "inside", while those who participated in a sub-project facilitated by our centre were labelled "outside". We congratulate them on their excellent performance.

To see the dissertation of our students, **scan the QR code** beside their names.

1	<b>KATALIN MÁRTA</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Pécs inside	D1: 0 Q1: 20 Q2: 2 Q3: 0 Q4: 0	Comulative IF: 64,066 First author IF: 12,32	
2	<b>ADRIENN ERŐS</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Pécs inside 2020 10	D1: 0 Q1: 7 Q2: 3 Q3: 0 Q4: 0	Comulative IF: 28,362 First author IF: 11,204	
3	<b>ZSOLT SZAKÁCS</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Pécs inside 2021 48	D1: 3 Q1: 29 Q2: 11 Q3: 4 Q4: 0	Comulative IF: 160,303 First author IF: 37,102	
4	<b>DÁNIEL PÉCSI</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Pécs inside 2021 32	D1: 0 Q1: 22 Q2: 6 Q3: 1 Q4: 0	Comulative IF: 97,146 First author IF: 16,324	
5	<b>PÉTER VARJÚ</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Pécs inside 2022 20	D1: 1 Q1: 15 Q2: 2 Q3: 2 Q4: 0	Comulative IF: 61,477 First author IF: 9,909	
6	<b>PATRIK KÉRINGE</b> University: Type of PhD: Date of dissertation: No. of articles:	<b>R</b> University of Pécs inside 2022 9	D1: 1 Q1: 5 Q2: 1 Q3: 0 Q4: 0	Comulative IF: 42,869 First author IF: 8,69	

7	<b>KELEMTINA OCSI</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Pécs inside	D1: 6 Q1: 15 Q2: 2 Q3: 0 Q4: 0	Comulative IF: 106,091 First author IF: 25,164	
8	<b>ORSOLYA HUSZÁ</b> University: Type of PhD: Date of dissertation: No. of articles:	Semmelweis University outside	D1: 1 Q1: 4 Q2: 0 Q3: 1 Q4: 1	Comulative IF: 21,459 First author IF: 4,39	
9	<b>ÁGNES LILLA SZI</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Szeged outside	D1: 1 Q1: 4 Q2: 2 Q3: 0 Q4: 0	Comulative IF: 26,482 First author IF: 3,411	
10	<b>PÉTER KUPÓ</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Pécs outside 2021 12	D1: 0 Q1: 3 Q2: 5 Q3: 0 Q4: 4	Comulative IF: 19,302 First author IF: 8,4	
11	<b>ANNA FÁBIÁN</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Szeged outside 2021 34	D1: 0 Q1: 16 Q2: 6 Q3: 2 Q4: 8	Comulative IF: 88,759 First author IF: 17,294	
12	<b>BÁLINT TRIMMEI</b> University: Type of PhD: Date of dissertation: No. of articles:	Semmelweis University outside	D1: 1 Q1: 3 Q2: 2 Q3: 0 Q4: 0	Comulative IF: 20,354 First author IF: 9,6	
13	<b>ANIKÓ NAGY</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Szeged outside 2021 8	D1: 1 Q1: 3 Q2: 3 Q3: 1 Q4: 0	Comulative IF: 11,385 First author IF: 3,799	

14	<b>ADRIENN HALÁS</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Szeged outside	D1: 0 Q1: 7 Q2: 6 Q3: 0 Q4: 0	Comulative IF: 38,862 First author IF: 3,57	
15	<b>ALEXANDRA BÁL</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Pécs outside	D1: 2 Q1: 4 Q2: 4 Q3: 0 Q4: 0	Comulative IF: 29,444 First author IF: 13,154	
16	<b>ALEXANDRA DEW</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Szeged outside	D1: 0 Q1: 6 Q2: 1 Q3: 0 Q4: 0	Comulative IF: 24,267 First author IF: 10,828	
17	<b>SZILÁRD GÓDI</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Pécs outside 2021 20	D1: 0 Q1: 12 Q2: 6 Q3: 2 Q4: 0	Comulative IF: 52,075 First author IF: 2,063	
18	<b>SANG-NGOEN TH</b> University: Type of PhD: Date of dissertation: No. of articles:	Semmelweis University outside	D1: 0 Q1: 3 Q2: 2 Q3: 0 Q4: 1	Comulative IF: 20,001 First author IF: 5,811	
19	<b>SADAENG WUTT</b> University: Type of PhD: Date of dissertation: No. of articles:	Semmelweis University outside	D1: 0 Q1: 3 Q2: 1 Q3: 0 Q4: 0	Comulative IF: 16,393 First author IF: 3,116	
20	<b>BÁLINT ERŐSS</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Pécs outside 2020 70	D1: 3 Q1: 15 Q2: 11 Q3: 0 Q4: 0	Comulative IF: 100,529 First author IF: 6,389	

21	<b>DÓRA MOSZBACI</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Szeged outside	D1: 0 Q1: 11 Q2: 3 Q3: 0 Q4: 0	Comulative IF: 45,799 First author IF: 14,556	
22	<b>JUDIT BAJOR</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Pécs outside 2020 183	D1: 0 Q1: 18 Q2: 11 Q3: 4 Q4: 1	Comulative IF: 102,787 First author IF: 7,244	
23	<b>ROLAND HÁGEND</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Szeged outside	D1: 0 Q1: 7 Q2: 2 Q3: 0 Q4: 0	Comulative IF: 29,546 First author IF: 6,969	
24	<b>ESZTER GARAMII</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Szeged outside	D1: 0 Q1: 12 Q2: 2 Q3: 0 Q4: 0	Comulative IF: 59,865 First author IF: 11,011	
25	<b>EMŐKE PÓTÓNÉ</b> University: Type of PhD: Date of dissertation: No. of articles:	University of Pécs outside	D1: 0 Q1: 6 Q2: 2 Q3: 0 Q4: 0	Comulative IF: 37,435 First author IF: 14,886	



# SEMINAR Lectures

The SU CTM aims to introduce PhD students to some of the world's most outstanding researchers, physician-scientists, pharmaceutical company executives, their carrer, scientific work, discoveries and thinking of science.

The Seminar Lecturers are invited in close collaboration with the National Biomedical Foundation which runs one of Europe's most prominent undergraduate scientist education program.

The program is to support talented young people interested in biomedical research and to foster their scientific work.

The secondary school part of the program trains more than 1000 high school students nationwide. The university training program is attended by students who go to the university and carry out their scientific research work in one of the cities of the country with higher education in the sciences, such as Budapest, Pécs, Szeged or Debrecen.

The following distinguished scientists have already held a seminar or will hold one this year.



#### **OLE HOLGER PETERSEN**

Professor, Cardiff School of Biosciences, Cardiff University, Wales, UK

#### TITLE OF THE LECTURE

Science, Scientific Publishing and Scientific Advice for Policy: 50 years of personal experiences

#### DATE OF THE LECTURE

December 9 (Thursday), 2021

#### ABOUT THE LECTURER

Ole Holger Petersen CBE, FMedSci, FRS (born 3 March 1943) is a research professor at Cardiff University where he studies physiology, especially calcium signalling and the pancreas. Prior to this he was Symers Professor of Physiology at the University of Dundee, and then George Holt Professor of Physiology at the University of Liverpool.

Petersen was elected a member of the Academia Europaea in 1988. He was elected a Fellow of the Royal Society (FRS) in 2000 "for his major contributions to the understanding of the cell physiology of calcium signalling", and appointed a Commander of the Order of the British Empire (CBE) in the 2008 New Year Honours, "for services to Science". He is also a Fellow of the Academy of Medical Sciences.

He was the very first in the world to use the patch clamp technique on epithelial cells. Notably, his research decisively accelerated the spread of the patch clamp technique, for which Erwin Neher and Bert Sakmann were awarded the Nobel Prize in 1993.



#### **PETER DOHERTY**

**Nobel Prize Laureate** Veterinarian & immunologist Peter Doherty Institute at the University of Melbourne, AU

**TITLE OF THE LECTURE** Sensing and dealing with threats

**DATE OF THE LECTURE** April 7 (Thursday), 2022, online

#### ABOUT THE LECTURER

Peter C. Doherty was born in Brisbane, Australia in 1940. At the age of 17 he applied to the University of Queensland to study veterinary medicine. He graduated with a BSc in 1962 and a MSc degree in 1966, while also completing the rural veterinary and laboratory internships required by the State Department of Agriculture. He then applied for a post at the Moredun Research Institute in Edinburgh and obtained a PhD from the University of Edinburgh in 1970.

Doherty returned to Australia in December 1971 to the Australian National University in Canberra, where he was offered a research post. He "first studied Semliki Forest virus infection in mice, then moved on to lymphocytic choriomeningitis virus (LCMV), which was more suitable for immunoassays. In 1973, he met Rolf Zinkernagel and they started a joint program to study how the immune system's ,killer cells', the T cells, recognize which virusinfected cells to destroy. The discovery soon found practical applications in transplantation, vaccine development, autoimmune disease research and the development of anti-infective drugs.



#### TIM HUNT

Nobel Prize Laureate biochemist and molecular physiologist

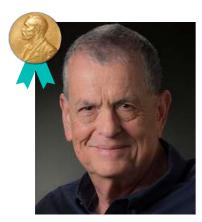
TITLE OF THE LECTURE Some lessons from a life in science

**DATE OF THE LECTURE** April 9 (Saturday), 2021, online

#### **ABOUT THE LECTURER**

Tim Hunt is a biochemist. With Lee Hartwell and Paul Nurse he shared in the Nobel Prize in Physiology or Medicine in 2001 "for their discoveries of key regulators of the cell cycle". Tim's contribution was the discovery of cyclins, proteins that are crucial for mitosis and other cell cycle transitions. Tim's earlier work focused on the control of haemoglobin synthesis in red blood cells.

Amongst other things, he discovered that double-stranded RNA (normally only found in virus-infected cells) was a powerful inhibitor of protein synthesis and, together with colleagues in the Department of Biochemistry at the University of Cambridge, figured out the mechanism — a protein kinase that phosphorylated an initiation factor. This led Tim to study protein synthesis in clams, sea urchins and eventually frog eggs, which revealed the abrupt disappearance of cyclins in dividing cells from yeast to man. In the end, it turned out that cyclins bind to and activate the enzymes that had been identified by Lee and Paul, the cyclin-dependent kinases (CDKs).



#### AARON CIECHANOVER

Nobel Prize Laureate Israeli biologist

TITLE OF THE LECTURE

The road for cure of a disease necessitates solving major bioethical problems: lessons learnt from the COVID-19 pandemic

**DATE OF THE LECTURE** April 5 (Tuesday), 2022

#### ABOUT THE LECTURER

Aaron Ciechanover was born in Haifa in 1947. He received his M.Sc. (1971) and M.D. (1973) from the Hebrew University in Jerusalem. After completing his national service (1973-1976) as military physician, he continued his studies to obtain a doctorate in biological sciences in the Faculty of Medicine in the Technion (1982). There, as a graduate student with Dr. Avram Hershko and in collaboration with Dr. Irwin A. Rose from the Fox Chase Cancer Centre in Philadelphia, USA, they discovered that covalent attachment of ubiquitin to a target protein signals it for degradation. In 2004 they received the Nobel Prize in Chemistry for characterizing the method that cells use to degrade and recycle proteins using ubiquitin.

He is currently a Distinguished Research Professor in the Faculty of medicine at the Technion – Israel Institute of Technology in Haifa, Israel. Aaron Ciechanover won the Nobel Prize shared with Dr. Avram Hershko and Dr. Irwin A. Rose in Chemistry in 2004 for characterizing the method that cells use to degrade and recycle proteins using ubiquitin.



#### KURT WÜTHRICH

Swiss Nobel Prize Laureate chemist/biophysicist

#### TITLE OF THE LECTURE

The Molecules of Life: DNA, RNA, Proteins – History Placed in Perspective

#### DATE OF THE LECTURE

April 5 (Tuesday), 2022, online

#### ABOUT THE LECTURER

He was born in Aarberg and studied chemistry, physics, and mathematics at the University of Bern before pursuing his PhD at the University of Basel in 1964. During his graduate studies, Kurt Wüthrich started out working with electron paramagnetic resonance spectroscopy.

As a postdoc he began working with the newly developed and related technique of nuclear magnetic resonance spectroscopy to study the hydration of metal complexes. When he joined the Bell Labs, he started studying the structure and dynamics of proteins. After he returned to Zürich, collaborating with his colleagues, they developed the first two-dimensional NMR experiments, and established the Nuclear Overhauser effect as a convenient way of measuring distances within proteins.

In 2002 Kurt Wüthrich received half of the Nobel Prize in Chemistry for his development of nuclear magnetic resonance spectroscopy for determining the three-dimensional structure of biological macromolecules in solution.



#### ERWIN NEHER German Nobel Prize Laureate biophysicist

TITLE OF THE LECTURE

Dynamic Priming of Synaptic Vesicles: Consequences for Shortterm Plasticity and Heterogeneity among Synapses

**DATE OF THE LECTURE** April 6 (Tuesday), 2022

#### ABOUT THE LECTURER

Erwin Neher was born in Landsberg am Lech in 1944. He enrolled at the Munich Technical College in 1963, majoring in physics. After obtaining a BSc degree, he went to the University of Wisconsin on a Fulbright scholarship. In 1967, he returned to Munich, where he began research on the synapses of nerve cells and the ionic currents in their membranes at the Max Planck Institute of Psychiatry. There he met Bert Sakmann, a PhD student working on a similar topic. After obtaining his doctorate, he continued his work at the Max Planck Institute in Göttingen with Bert Sakmann from 1973. Together, they began to develop a technique to measure the function of a single ion channel in a cell; the result of their work, the patch clamp method, was finally published in 1976.

After 1983, his interest turned from ion channels to the inside of the cell, and he investigated cellular responses to nerve stimuli such as hormone secretion and neurotransmitter secretion. In 1991 Erwin Neher and Bert Sakmann won the Nobel Prize for Medicine, for discovering the function of ion channels in cells and for the development of the patch clamp measurement technique.



#### **JEAN-LOUIS VINCENT**

MD, Phd, Professor of intensive care and intensivist from Brussels, Belgium

TITLE OF THE LECTURE Why I love intensive care medicine

**DATE OF THE LECTURE** February 24 (Thursday), 2022

#### ABOUT THE LECTURER

Professor Jean-Louis Vincent is currently Professor of intensive care medicine at the Université Libre de Bruxelles and intensivist in the Department of Intensive Care at Erasme University Hospital in Brussels, Belgium.

He is a Past-President of the World Federation of Societies of Intensive and Critical Care Medicine (WFSICCM), the European Society of Intensive Care Medicine (ESICM), the European Shock Society (ESS), the Belgian Society of Intensive Care Medicine (SIZ), and the International Sepsis Forum (ISF). He is a member of the Belgian Royal Academy of Medicine and was made a Baron by the King of Belgium. He also received numerous international awards.

He has signed over 1000 peer-reviewed articles, 400 book chapters and 1000 abstracts. He has edited more than 112 books, and is the editor-in-chief of Critical Care, Current Opinion in Critical Care, and ICU Management & Practice. His name appears more than 1300 times in Pubmed, and his work has been cited more than 240,000 times; his H-index is 192.



#### GÁBOR ORBÁN

Chairman of the Foundation for National Health Care and Medical Education & CEO of Gedeon Richter Plc.

TITLE OF THE LECTURE

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**DATE OF THE LECTURE** March 17 (Thursday), 2022

#### ABOUT THE LECTURER

Appointed Chief Executive Officer of Gedeon Richter Plc. from November 2017. He is the Chairman of the Foundation for National Health Care and Medical Education (Semmelweis University) from August 2021.

Began his professional career as an economist for the National Bank of Hungary and the European Central Bank. He later joined Aegon Asset Management where he worked as a fund manager and the head of the fixed income desk. He served as the state secretary in charge of taxation and the financial sector at the Ministry for National Economy for two and a half years, followed by a year spent at Banque Rothschild where he worked as a consultant. He earned his MA degree at the Budapest University of Economics.



#### **SHAHROKH SHARIAT**

M.D., Director of the University Clinic of Urology, Vienna & Assistant professor of urology and oncology in New York, Dallas, Prague and Moscow

TITLE OF THE LECTURE How to become a successful physician-scientist

**DATE OF THE LECTURE** March 24 (Thursday), 2022

#### ABOUT THE LECTURER

Professor Shariat is a leading member of several multi-centre research groups (Bladder Cancer Research Consortium, Bladder Cancer Detection Group and Urothelial Upper Tract Carcinoma Collaboration) and prospective clinical trials. He is a member of numerous academic societies and a reviewer for a scientific journal, for abstracts at meetings and for grants to national and international organizations. He is on the editorial board of journals such as European Urology, BJU International, World Journal of Urology, Current Opinion in Urology (editor-in-chief) and Immunotherapy. He runs a charity for refugees and participates as a physician in two other charitable projects.

His scientific interest is in urological oncology – including molecular mechanisms and markers, early detection, research into the origin and therapy of diseases, translational studies and outcome research. In particular, he is engaged in the discovery, testing and validation of molecular markers related to the biological and clinical properties of prostate and urothelial carcinomas. Also in 2020, he was awarded the very prestigous Doctor Honoris Causa degree by Semmelweis University.



#### **BOTOND ROSKA**

Neurobiologist, Director of the Institute of Molecular and Clinical Ophthalmology Basel (IOB) and Professor of Medicine and Science at the University of Basel, Switzerland

TITLE OF THE LECTURE

How to become a successful scientist

#### DATE OF THE LECTURE

November 14 (Monday), 2022

#### ABOUT THE LECTURER

Professor Roska's research is focused on visual perception including its principles and pathways of information processes. His laboratory aims to find ways to repair visual dysfunction by investigating the function of the retina, thalamus and the cortex at the level of cell types and circuits, and using the acquired knowledge to understand disease mechanisms and to develop treatments.

Professor Roska has graduated at Semmelweis University in 1995 and earned a PhD in neurobiology at the University of California, Berkeley in 2002. After finishing his PhD, he researched genetics and virology at the Harvard University Medical School. He then continued his work in Basel, Switzerland to establish a research group at the Friedrich Miescher Institute for Biomedical Research while joining the faculty of the University of Basel. He is now founder director of the Institute of Molecular and Clinical Ophthalmology Basel, Switzerland.



#### **BRUCE A. BEUTLER**

**Nobel Prize Laureate** immunologist and geneticist director of the Centre for the Genetics of Host Defense at the University of Texas

#### TITLE OF THE LECTURE

To be announced

#### **DATE OF THE LECTURE** To be announced

#### ABOUT THE LECTURER

Bruce Alan Beutler is an American immunologist and geneticist. He was the first to isolate mouse tumor necrosis factor-alpha (TNF), and to demonstrate the inflammatory potential of this cytokine, proving its important role in endotoxin-induced shock. He discovered an important family of receptors that allow mammals to sense infections when they occur, triggering a powerful inflammatory response. For this work he received the 2011 Nobel Prize in Physiology or Medicine.

Beutler received his undergraduate degree from the University of California at San Diego in 1976, and his MD degree from the University of Chicago in 1981. After two years of residency at the University of Texas Southwestern Medical Center, he became a postdoctoral fellow and then an Assistant Professor at the Rockefeller University. Returning to Dallas in 1986 as an HHMI investigator, he designed recombinant inhibitors of TNF that are widely used in the treatment of rheumatoid arthritis and other inflammatory diseases. Moving in 2000 to the Scripps Research Institute, Beutler developed the largest mouse mutagenesis program in the world, and applied a forward genetic approach to decipher the signaling pathways activated by TLRs.



#### **RANDY SCHEKMAN**

**Nobel Prize Laureate** cell biologist at the University of California, Berkeley

TITLE OF THE LECTURE To be announced

**DATE OF THE LECTURE** To be announced

#### **ABOUT THE LECTURER**

Randy Wayne Schekman is an American cell biologist who was awarded the 2013 Nobel Prize in Physiology and Medicine for his research on vesicular transport, which has contributed to our understanding of how molecules produced by cells are delivered to the right place at the right time. His main interests are saccharomyces cerevisiae, organelle assembly, intracellular protein transport, assembly of cellular organelles, neurodegenrative disease, regulation of lymphocyte development.

He graduated from high school at Western High School in Anaheim and went on to study at the University of California, Los Angeles (UCLA) in 1966. One of his professors there was Willard F. Libby, who won the Nobel Prize in Chemistry for his invention of radiocarbon dating. He was involved in bacteriophage genetics research during his undergraduate studies and spent a year as an exchange student at the University of Edinburgh. After returning home, he took a summer job at the Biological Laboratories of Harvard University and wrote his first scientific communication based on his research.



#### THOMAS C. SÜDHOF

German-American Nobel Prize Laureate biochemist professor in the School of Medicine in the Department of Molecular and Cellular Physiology ath Stanford University

#### TITLE OF THE LECTURE

To be announced

**DATE OF THE LECTURE** To be announced

#### ABOUT THE LECTURER

Thomas Christian Südhof is a German-American biochemist who was awarded the 2013 Nobel Prize in Physiology and Medicine for his discovery of how neurotransmitter molecules are transported within cells in vesicles in nerve cells. His work initially focused on the mechanism of neurotransmitter release which is the first step in synaptic transmission, and whose molecular basis was completely unknown in 1986. Later on, Südhof's work increasingly turned to the analysis of synapse formation and specification, processes that mediate the initial assembly of synapses, regulate their maintenance and elimination, and determine their properties.

He studied at the university in Aachen, at Harvard University in Cambridge, Massachusetts in the United States, and at the university in Göttingen. He received his Ph.D. from Göttingen's Max Planck Institute for Biophysical Chemistry in 1982. The following year, Südhof moved to the University of Texas Southwestern Medical Centre. In 2008 he moved to Stanford University in Palo Alto, California.

## **CONTACT US**

SEMMELWEIS UNIVERSITY CENTRE FOR TRANSLATIONAL MEDICINE

ADDRESS26. Üllői str., Budapest 1085DIRECTORPéter HegyiEMAILtmk@semmelweis-univ.hu

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