



# STUDENTS & PROJECTS

LEARNING BY DOING

2024  
2025

# IMPRINT

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# SALUTATORY

## A FEW WORDS FROM OUR LEADERSHIP

On June 1st, 2021, the Centre for Translational Medicine (CTM) began its work as 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 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 (TM) 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 of boosting Hungary's competitiveness in all fields of medicine, the Translational Medicine PhD Program combines education and scientific activity, which are then translated into patient care. Furthermore, this model aims to provide a suitable career model for outstanding doctors and professionals, thereby improving the quality of education, patient care, and scientific performance.

The new TM PhD 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 Centre for  
Translational Medicine*

# INTRODUCTION TO TRANSLATIONAL MEDICINE





# THE HISTORY OF TRANSLATIONAL MEDICINE IN HUNGARY

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

The University of Pécs has established excellent conditions for medical care, and its motivated professors, students, and physicians have provided great resources for patient care, education, and research. The TMF has promoted the practical application of scientific results and innovations in healthcare, 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 a 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 the Centre for Translational Medicine (CTM), one of the largest TM centres in Europe, where in 2021 **91**, in 2022 **84**, in 2023 **89**, whereas in 2024 **88** PhD students began their research. In 2024 we have also started a 1-year MSc program with **14** students. This worldwide unique program is attracting a considerable amount of attention internationally, allowing us to estimate significant growth in the program's future.



**PÉTER HEGYI**

*Director  
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

## 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 which makes the University an internationally recognized center.

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



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 Translational Medicine Foundation (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 healthcare. 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.
- b) **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.).
- c) **participating in the organization** of conferences and training courses and the funding of research-related procurement, services, and human resource searches and selection.
- 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. These materials are also accessible to students in fee-paying courses if their university donates a certain percentage of their fees to support the foundation's objectives.



# NATIONAL ACADEMY OF SCIENTIST EDUCATION



## THE TRANSFORMATION OF THE SZEGED SCIENTISTS ACADEMY INTO THE NATIONAL ACADEMY OF SCIENTIST EDUCATION

In 2013, the Foundation for the Future of Biomedical Sciences in Szeged established the Szeged Scientists Academy. Based on the results listed over the years, it came to the point in 2021 where - with the support of the Hungarian government – the name of the Foundation was changed to National Biomedical Foundation and the program expanded to National Academy of Scientist Education (NASE) program, to include all cities with institutes of higher education in human life sciences (Budapest, Debrecen, Pécs, Szeged).

The short-term goal of the program remained to embrace talented young people interested in biomedical research, to support their scientific work, to make the career model of scientists more attractive, as well as to keep young researchers in Hungary in the long-term.

## GENERAL INTRODUCTION OF THE NATIONAL ACADEMY OF SCIENTIST EDUCATION

One of the essential innovations of the educational processes of the Szeged Scientists Academy, and then of the National Academy of Scientist Education is that it guides students who are talented in research through the steps of becoming a scientist from their secondary school years. The principal education of the secondary school pupils takes place in seven National Education Centres (in Debrecen, Gödöllő, Hódmezővásárhely, Pécs, Szeged and Szombathely) and 21 Regional Education Centres. The Regional Education Centres are led by the Szent-Györgyi Senior Teachers whose primary task is to find and mentor the pupils within their region who are particularly interested in natural sciences and are later planning to choose a research career. The professional background to the regular theoretical and practical training organized by the Senior Teachers is constantly provided by the Academy.

The university students are trained in four cities (Budapest, Debrecen, Pécs, Szeged), in six Scientific Laboratories, at the best-equipped laboratories in the country, under the professional supervision of the best mentors (the so-called Szent-Györgyi Mentors). In each laboratory, a group of mentors awaits the students, who will also start research work along with their university studies. On the educational side, some university students are helped with an individual curriculum, so students can independently plan being in the laboratory when necessary for their research work. Of course, high-quality research activity cannot come at the expense of educational obligations.





# BLENDDED EDUCATION

## SPECIFICATIONS OF OUR 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 and participate in meta-analyses, studies related to different registers, and clinical trials.

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.

### TEACHING METHODS

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#### 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 20 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 a 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.

#### WORKSHOP

The incorporation of in-person workshops following e-learning modules is a commendable approach, enhancing the overall educational experience by bridging theoretical knowledge with practical application. 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 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

Progress Reports (PRs) are scheduled every 3 or 6 months, aligning with the academic year. Attendance is compulsory for all participants, and rescheduling on an alternate day is not feasible. Each PR session entails an 8/10-minute presentation, succeeded 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 develop presentation techniques, and to build relationships with members of other students. The PR VI is equal to the complex exam, which has to be completed by the end of the 2nd year. Starting from the 3rd year, students in an advanced phase can start to prepare their thesis. Therefore, we organize PR VII as the house defense, while PR VIII represents the thesis defense. By the time of the thesis defense, the students had already presented their project almost 100 times.

## 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.

## EXPERT SUPPORT

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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 highly experienced physician-scientists who provide help from the design of the study until the publication. They help the students (1) polish their projects, (2) 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 bridge 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 experts 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

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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 and 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.

## LIFETIME CAREER MODEL

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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 project meetings is required. It comes with great benefits such as participation in research, direct recruitment opportunities, 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, and IT support. SMPs will also join a continuously growing 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 involves mentoring Year 1 PhD 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 great number of co-authorships.

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. Those in an SMA position will get the possibility to work in the EUROSTAT database along with Academia Europaea members, and lastly, a co-authorship will come with the position.

The last three steps are for highly dedicated members of the CTM staff. **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 have the possibility to participate in soft skill training, 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 **Expert Scientific Facilitators (ESF)** group. Members of the ESF group must attend regular group meetings and progress reports, and they must give lectures for the Year I and II students. ESFs are also expected to initiate collaborations, participate in the recruitment of new members, and initiate innovative solutions in the PhD education. This minimum requirement includes the preparation of the PhD thesis. As a result, ESFs will have the possibility to get access to international training, unique collaborations, and memberships.

The last step in the seven-step progression system is joining the **Expert Scientific Discussants (ESD)** group. A PhD degree is mandatory for this position. ESDs must attend regular group meetings and progress reports, and they must give lectures for PhD students. Besides ESF tasks, ESDs are required to review PhD thesis and help students prepare for the PhD defense. Work comes with important rewards. Those in the ESD group will get help in initiating their own research groups. SMEs, ESF, and ESD will be nominated as assistant lecturers or assistant professors.



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.

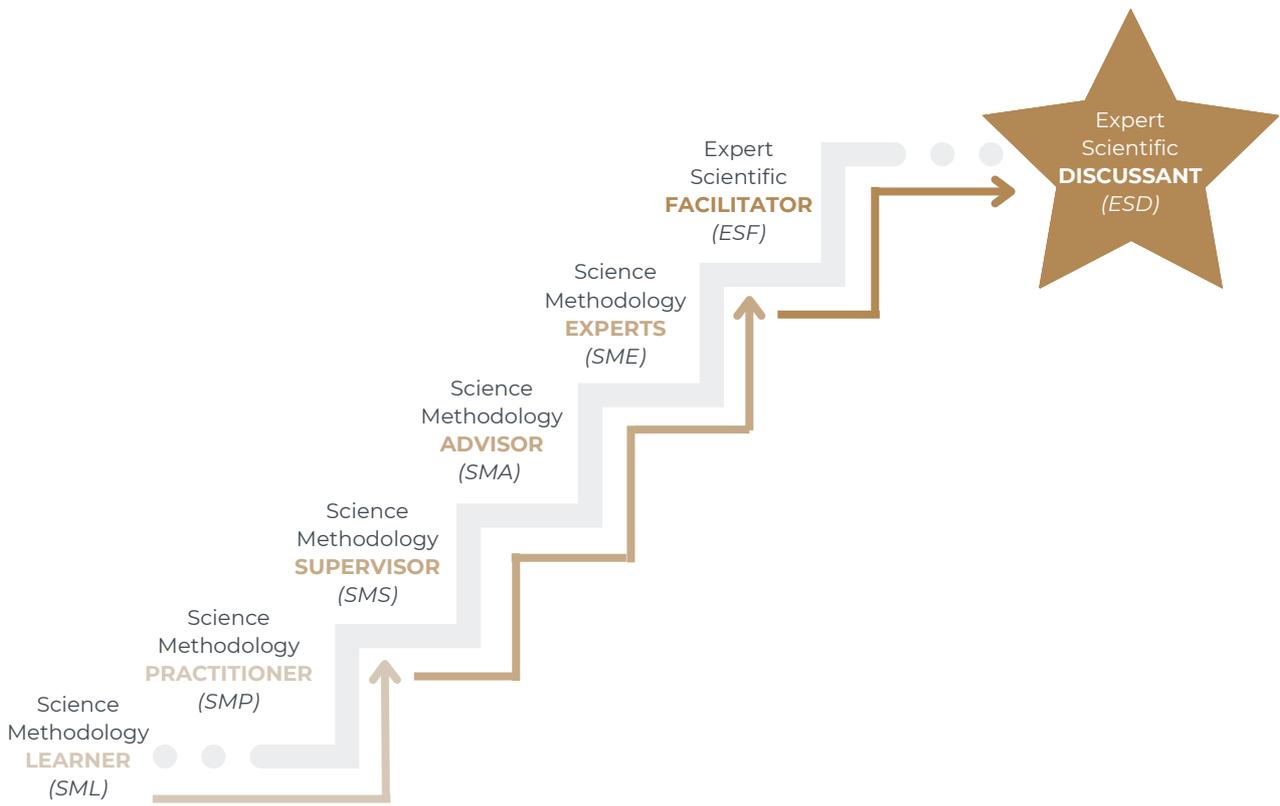


Figure: Steps of the career path model at the Centre for Translational Medicine.

# EDUCATION **STATISTICS**



In the following section with the use of figures and statistics, we would like to present the first three years of our PhD program. During this academic year, our less than 50 staff members are training more than 500 participants from different groups, such as PhD students, TDK students, supervisors, and students who are only taking a single course at the CTM.

From September, we were able to increase the percentage of the PhD students enrolled in our program among all PhD students at Semmelweis University from 32% to 36%, meanwhile both the national and international visibility and respect of our program have increased by welcoming students from 40 hospitals and 21 different countries.

Currently, we are monitoring a total of **705** projects and **307** papers are already published. Students are required to publish a minimum of two first-author papers. However, a numerous students run three, four or even five projects.

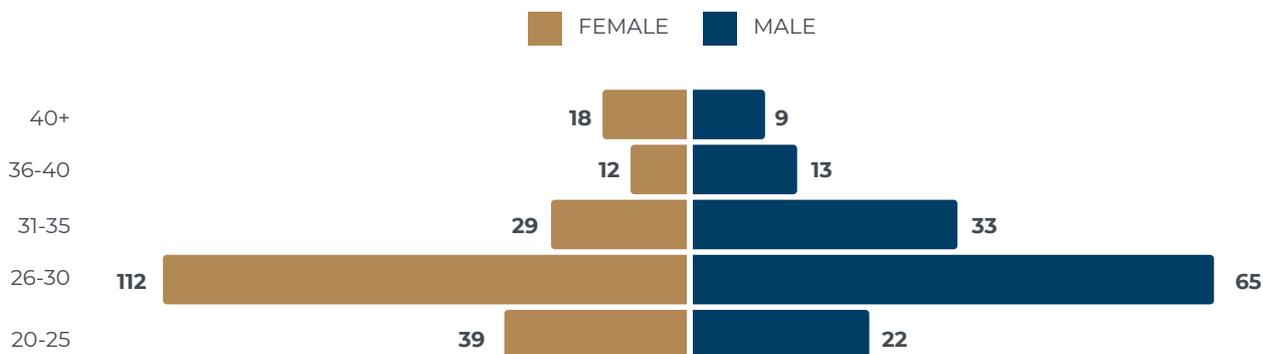
## GENDER DISTRIBUTION

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



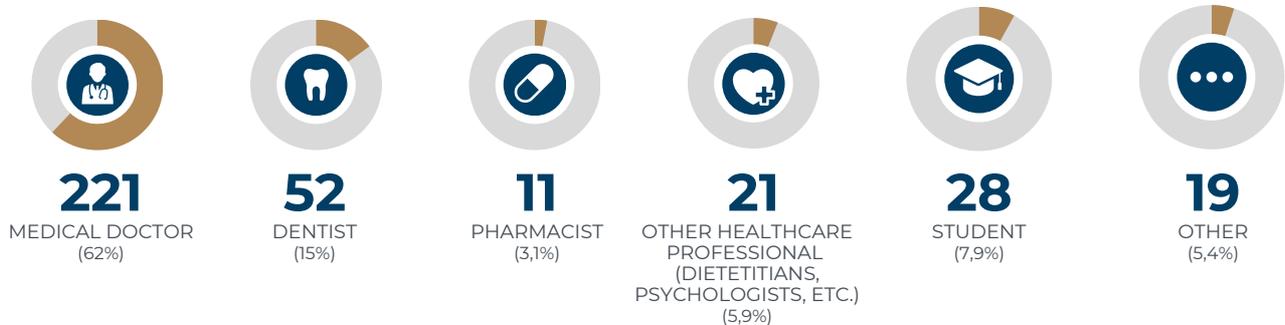
## AGE DISTRIBUTION

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 skills, eagerness to learn, and love for science.



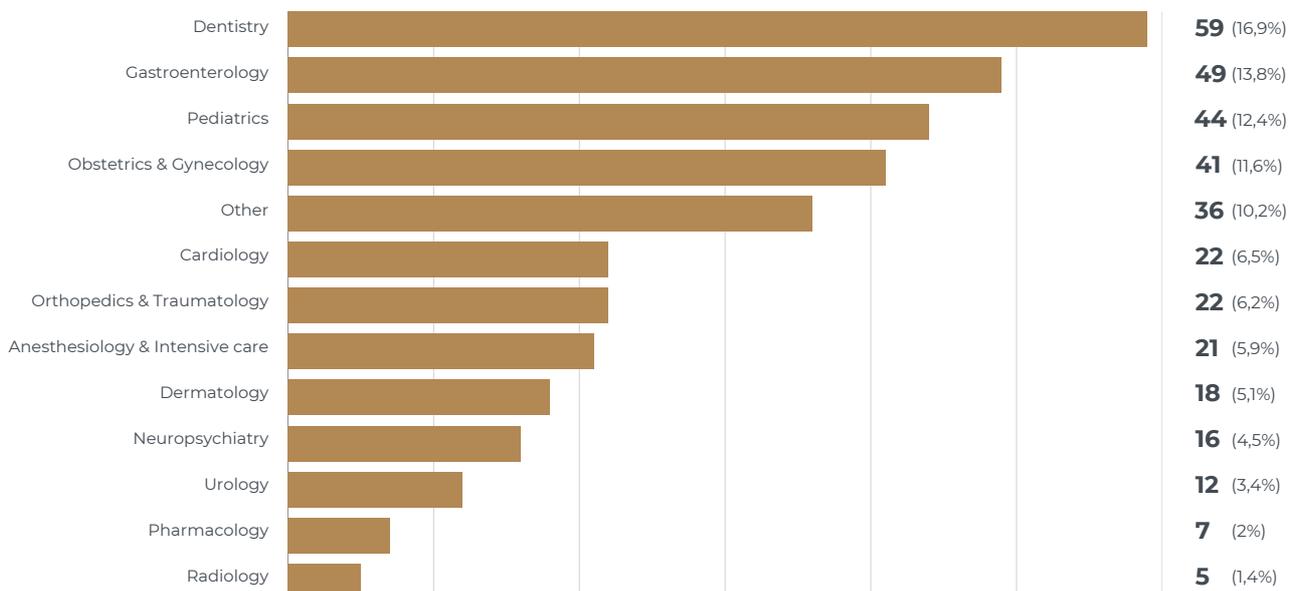
## OCCUPATION

Despite the large number of PhD students who are medical residents, participation is not limited to those with a medical degree. The program has an increased number of students **from all health sciences** such as dietetics, pharmacy, dentistry, psychology, and other marginal specialties.



## FIELD OF RESEARCH

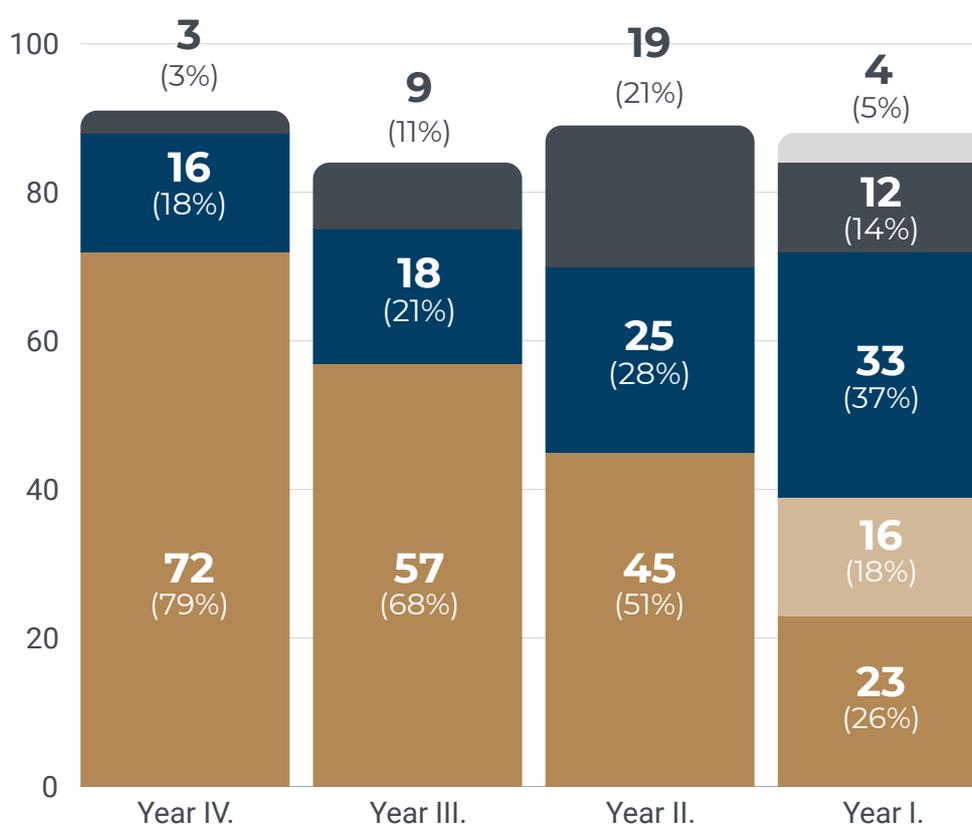
During the program, students work in groups according to their specialization. The most popular research fields among the attendees were dentistry, gastroenterology, pediatrics, obstetrics, and orthopedics. However, the interest of students stands over the whole healthcare specialty spectrum.



## WORKPLACE

The number of students is constant year by year. However, their origins are changing. In Year III, most of the students joined from Semmelweis University, and the number of foreign students was low. Compared to this, Year I students joined in high numbers from other centers in Hungary outside of SU, and also the **number of foreign students increased significantly**.

SU workers
  SU students
  Other hospitals in Hungary
  Foreigner in other country
  Foreigner SU student



The number of PhD students is growing each year. However, the **highest number of students is from Semmelweis University (SU)**. Below, we are presenting a table with the top SU centers. The Department of Obstetrics and Gynecology and Institute of Pancreatic Diseases provided more than 20 students each. On the other hand, Heim Pál National Pediatric Institute provides the highest number of students outside of SU in Hungary. The number of international students is also continuously growing, led by the University of Medicine, Pharmacy, Science and Technology of Tîrgu Mureş.

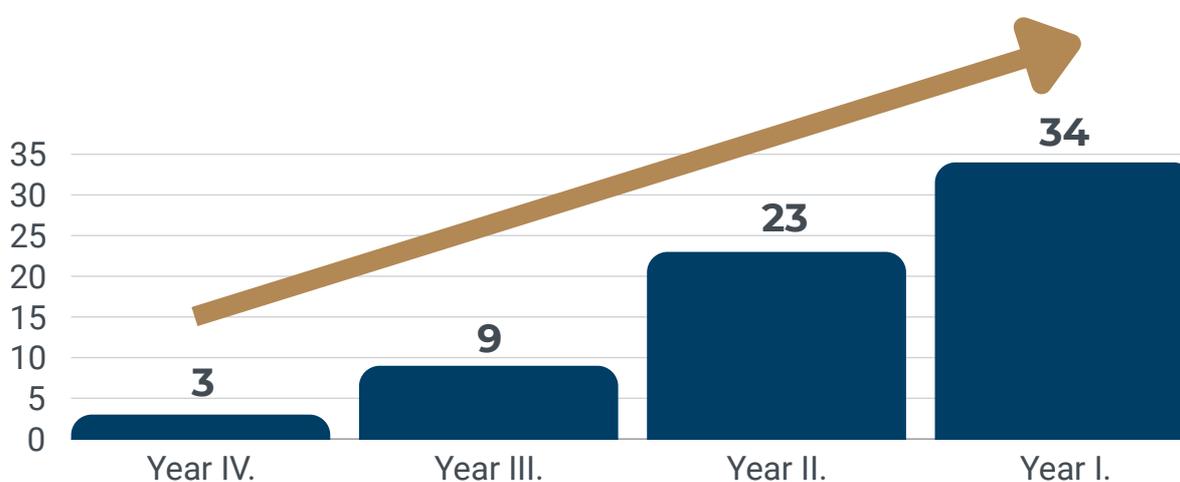
## FORM OF SUPPORT

The financial support in our training is constantly changing. Among Year III students, the majority are **supported by the Hungarian Government** and there are only three Stipendium Hungaricum supported students. Compared to this, among Year I students, the number of self-financed and Stipendium Hungaricum-supported students increased while we started to have more and more MD-PhD students.

Form of support / Years	Year IV.	Year III.	Year II.	Year I.	Total
PhD-general	88	75	66	56	285
PhD-general-MOL	2		2	5	9
MDPhD-general		1	5	16	22
MDPhD-foreign			3	4	7
MOL		2			2
PhD-EU bilateral		3	3	3	9
PhD-nonEU		2	3	4	9
PhD-StipHung	1	1	7		9
<b>Grand total</b>	<b>91</b>	<b>84</b>	<b>89</b>	<b>88</b>	<b>352</b>

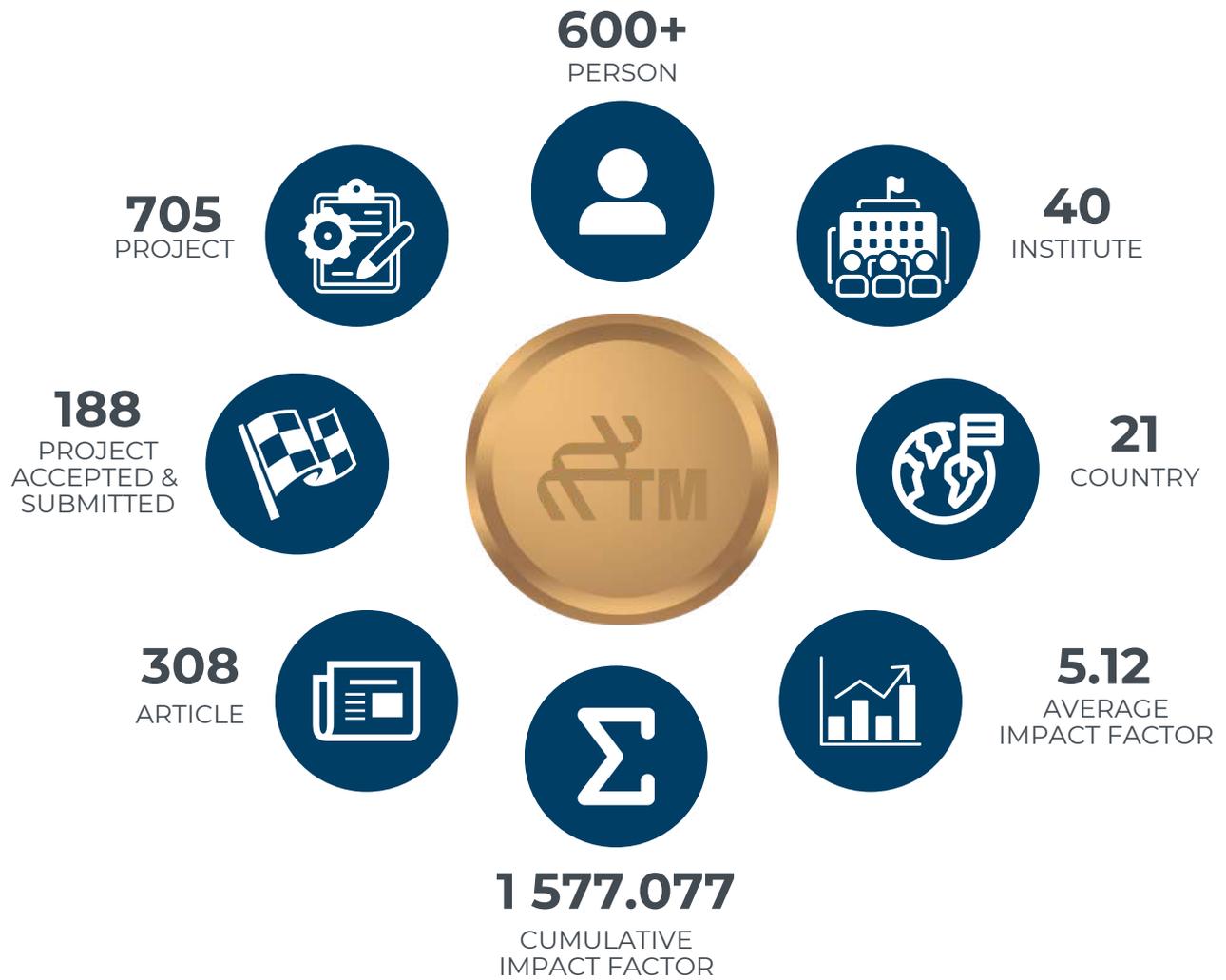
## INTERNATIONAL SUPPORT

Our center places special focus on building an international translational medicine network. Therefore, our aim is to **increase the number of international students**. International students attend not only from Europe but from any continent worldwide. The overall number of international students reached **34** this year.



## THE CENTRE IN NUMBERS

The following figure summarizes the most important numbers at the start of the 2024/2025 academic year, representing the scientific activity of the Centre for Translational Medicine and the PhD students participating in the training.



OUR CENTRE'S  
**ORGANOGRAM**



# DIRECTORATE

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The Directorate serves as the core leadership team of the Centre for Translational Medicine, steering the institution toward achieving excellence in education, research, and patient care. Comprised of experienced leaders, they ensure strategic planning, operational efficiency, and the seamless integration of scientific discovery into practical healthcare applications. Their collective vision supports the development of innovative approaches to translational medicine while fostering collaboration among diverse teams. By aligning academic, clinical, and research priorities, the Directorate plays a critical role in shaping the future of healthcare and science at the CTM.



**PÉTER HEGYI**  
*Director*



**GÁBOR VARGA**  
*General Vice Director  
Graduation & Implementation*



**ANDREA HARNOS**  
*Vice Director  
Biostatistics*



**SZILÁRD VÁNCSA**  
*Vice Director  
Education & Recruitment*



**JUDIT ZENTAI**  
*Vice Director  
Operations & Sustainability*



**DÓRA CZAPÁRI**  
*Vice Director  
Network & Communication*



**RITA NAGY**  
*Vice Director  
Integrity & Retention*

# COORDINATORS

---

The Coordinator team is pivotal to the smooth functioning of the CTM, overseeing various aspects of the program, from managing year-level activities to supervising specific research methodologies. Their leadership fosters collaboration, innovation, and progress across student groups and research projects. They serve as the primary link between students, supervisors, and the administrative team, ensuring clear communication and goal alignment. Through their dedication, the coordinators help create an environment where students thrive academically and professionally.

## STUDENT COORDINATORS

---



**ANETT RANCZ**  
*Year I Coordinator*



**MAHMOUD OBEIDAT**  
*Year II Coordinator*



**ALEXANDER S. WENNING**  
*Year III-IV Coordinator*



**CANER TURAN**  
*Undergraduate (TDK)  
Coordinator*

## METHODOLOGY COORDINATORS

---



**MARIE ANNE ENGH**  
*Meta-analysis  
Coordinator*



**AMIR MAKOLLI**  
*Deputy Meta-analysis  
Coordinator*



**BRIGITTA TEUTSCH**  
*Registry and Clinical trial  
Coordinator*



**ISABEL AMORIM**  
*Deputy Registry and  
Clinical trial Coordinator*

# OFFICE PERSONNEL

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The Office Personnel form the backbone of the CTM, providing essential administrative support, managing communication, and ensuring seamless coordination of daily operations. Their expertise in areas like HR, international relations, student affairs, and event organization plays a vital role in maintaining the center's efficiency. By handling logistical and organizational challenges, they enable researchers, students, and leaders to focus on their core activities. Their commitment to excellence ensures that the CTM operates smoothly, even in a dynamic, fast-paced environment.



**HENRIETT VÁCZ**  
*Head of Secretariat  
HR & Personnel*



**RÉKA KALTENECKER**  
*Secretarial Expert  
Student Affairs*



**ANNA IGNÁCZNÉ FODOR**  
*Secretarial Expert  
Back Office*



**FANNI NÉMETHNÉ NOBILIS**  
*Senior Event Manager  
Communication & Events*



**VIKTÓRIA KOCSIS**  
*Coordinator  
Graphics Design*



**ATTILA MÁRTA**  
*Coordinator  
Online Communication*

# SMS TEAM

The Scientific Methodology Support (SMS) team comprises highly skilled individuals dedicated to guiding students and researchers in their scientific endeavors. From refining methodologies to providing hands-on support during project development, the SMS team ensures the academic and professional growth of all participants. Their expertise is instrumental in maintaining the high standards of scientific rigor expected within the CTM. By fostering a supportive environment, the SMS team empowers students to tackle complex research challenges with confidence.



SZILÁRD  
VÁNCSA



RITA  
NAGY



ALEX  
S. WENNING



AMIR  
MAKOLLI



ANETT  
RANCZ



BIANCA  
GOLZIO



BRIGITTA  
TEUTSCH



CANER  
TURAN



DÁVID  
LACZKÓ



ESZTER ÁGNES  
SZALAI



FANNI  
MEZNERICS



ISABEL  
AMORIM



JIMIN  
LEE



KATA  
KELEMEN



KATA  
MARTYIN



LILI  
GULYÁS



LŐRINC  
FRIVALDSZKY



MAHMOUD  
OBEIDAT



MARIE ANNE  
ENG



MÁRK  
HERNÁDFŐI



NINA  
GALDZYTSKA



XINYI  
QIAN



DALMA  
KÖVES-DOBSZAI

# EDUCATION DEVELOPMENT & STATISTICIAN TEAM

The Education Development and Statistician Team drives the academic innovation at CTM, designing and implementing effective educational frameworks while offering expert statistical support. This team is integral to ensuring that students and researchers have the tools to produce high-quality, data-driven research. They work closely with faculty and students to design courses and methodologies that address evolving scientific needs. Their collaborative approach enhances the educational experience and strengthens the research impact of the Centre.



**ANDREA HARNOS**  
*Vice Director  
Biostatistics*

## EDUCATION DEVELOPERS



**ZSÓFIA MAGYAR**  
*Educational  
developer*



**DALMA BECK**  
*Educational  
developer*



**KINGA KINCŐ HORVÁTH**  
*Educational  
developer*



**JUDIT BENCZE**  
*Personal  
assistant*

## STATISTICIANS



**BOGLÁRKA  
SZENTES**



**ÁDÁM  
ZOLCSÁK**



**MIKOLT  
BAKONY**



**ZSOLT  
ABONYI-TÓTH**



**MÁRTON  
KISS**



**SZILVIA  
KISS-DALA**



**DÁNIEL SÁNDOR  
VERES**



**TAMÁS  
KÓI**



**PÉTER  
HÁRSFALVI**



**ZSOLT  
BÍRÓ**



**GERGELY  
AGÓCS**



**BENCE  
SZABÓ**



**RÉKA  
TÓTH**



**NELLI  
FARKAS**



**KAREN  
FAZEKAS**



**NOÉMI  
GEDE**



**ANNA  
WALTER**



**PÉTER  
MÁTRAI**



**ZOLTÁN  
SIPOS**

# MOST ACTIVE SUPERVISORS

The Most Active Supervisors are the mentors who go above and beyond in guiding students through their academic and research journeys. Their dedication and expertise not only inspire students but also significantly contribute to the center's outstanding scientific output and collaborative culture. By fostering a mentor-student relationship built on trust and mutual respect, they nurture the next generation of medical scientists. Their leadership ensures that students are equipped to tackle complex challenges in translational medicine with confidence and skill.



**PÉTER HEGYI**  
*20 students*



**ZSOLT MOLNÁR**  
*19 students*



**NÁNDOR ÁCS**  
*15 students*



**MIKLÓS GARAMI**  
*13 students*



**ANDRÁS BÁNVÖLGYI**  
*11 students*



**SZABOLCS VÁRBÍRÓ**  
*10 students*



**BÁLINT ERŐSS**  
*9 students*



**GÁBOR VARGA**  
*9 students*



**NORBERT KISS**  
*8 students*



**GÁBOR DURAY**  
*7 students*

# COLLABORATIONS

WITH INSTITUTES & HOSPITALS





## MOL PROGRAM

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The MOL program aims to promote the dissemination of knowledge in modern clinical science and foster scientific activity in Romania while establishing a collaborative network between Romania and Hungary. In 2024, the program was expanded to include Slovakia and the Czech Republic, further strengthening its regional impact. Additionally, the grant covers tuition fees for participants enrolled in bilateral university programs.

Eligible applicants must be under the age of 35, hold a medical degree, demonstrate proficiency in medical English at a minimum B2 level, and possess a strong interest in biomedical research.

The selection process is based on a points system that evaluates English language skills, prior scientific contributions, and clinical knowledge, among other criteria. For participants enrolled in bilateral university programs, the training fee is fully covered. Alternatively, those completing the program solely at Semmelweis University may qualify for an additional stipend, supplementing regular government-provided support.

The program has a duration of 12 months, with the possibility of a six-month extension if required. This extension is granted in cases where the participant's research project has not yet been published, during which time the Center for Translational Medicine (CTM) provides methodological and statistical support. Participants are also required to join the Translational Medicine PhD program at Semmelweis University.

To successfully complete the program, participants must engage actively in group meetings throughout its duration, fulfill all coursework requirements, submit at least one publication to a peer-reviewed journal, and present their research findings at a scientific conference.

### **AWARDED STUDENTS**

**2020/2021:** Stefania Bunduc, Brigitta Teutsch

**2021/2022:** Anett Rancz, Cristina Patoni, Emőke Henrietta Kovács

**2022/2023:** Mihaela Topola, Előd-János Zsigmond

**2023/2024:** Kincső Lőrincz, Adolf Lichtfusz

**2024/2025:** Andreea Mădălina Beldie, Eszter Borbély, Tudor-Cristian Cozma, Anca Cristina Dolhascu, Bernadett Miriam László-Dobai, Arnold Marchis, Sándor Orbán, Hanna Potra, Darius-Valentin Sandu, Kálmán János Zsigmond



## STIPENDIUM HUNGARICUM

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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.

### **AWARDED STUDENTS**

**2021/2022:** Mahmoud Obeidat, Bianca Golzio Navarro Calvancante, Garmaa Gantsetseg

**2022/2023:** Isabel Amorim Pinto das Virgens

**2023/2024:** Amir Makolli, Azamat Bissenov, Bruna Guimaraes, Esra Zhubi, Gökçe Can, Seba Aljomaa, Yasir Nabeel Al-Mohammad

# BILATERAL PHD EDUCATION PROGRAM

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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 the 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 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 are going to be required to participate. As for the current academic year, we have established a collaboration with two universities in this field and with three students undertaking doctoral studies.

## CONTRIBUTING INSTITUTES

Comenius University Bratislava, Slovakia

Grigore T Popa University of Medicine and Pharmacy of Iasi, Romania

Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

George Emil Palade University of Medicine, Pharmacy, Science and Technology of Târgu Mureș

The Chinese University of Hong Kong

Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences

## UNIVERSITIES & HOSPITALS

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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) and 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), and Carol Davila University of Medicine and Pharmacy (Bucharest, Romania).



SCIENTIFIC  
**ACHIEVEMENTS**





# SCIENTIFIC SUMMARY

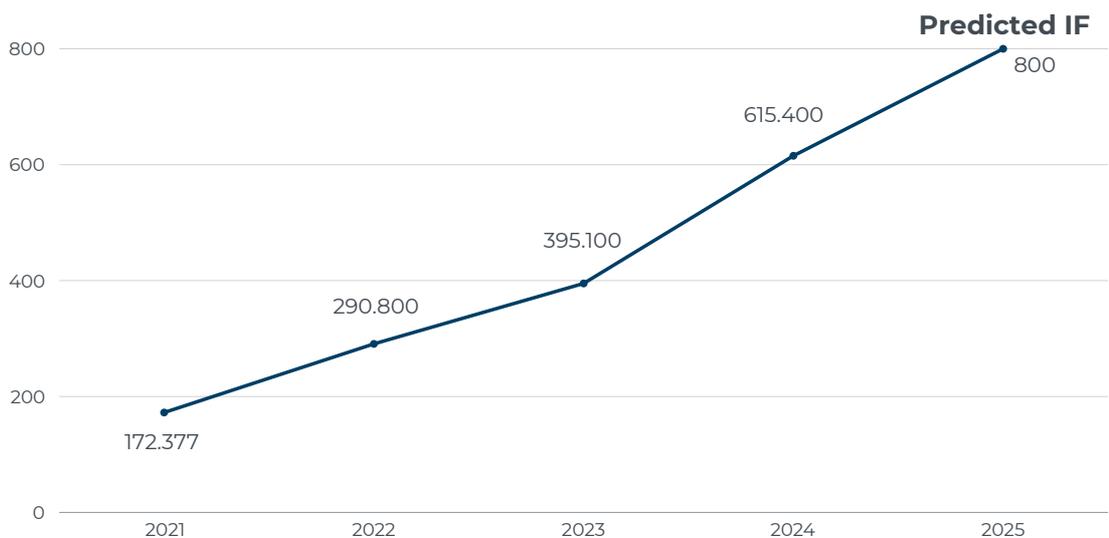
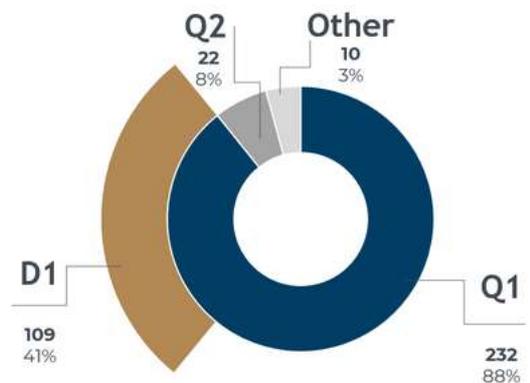


In January 2016, University of Pécs (UP) was the first university in Hungary to innovatively provide the possibility of this new system in Hungary, thereby taking on a completely unique patient care, education and science module.

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.

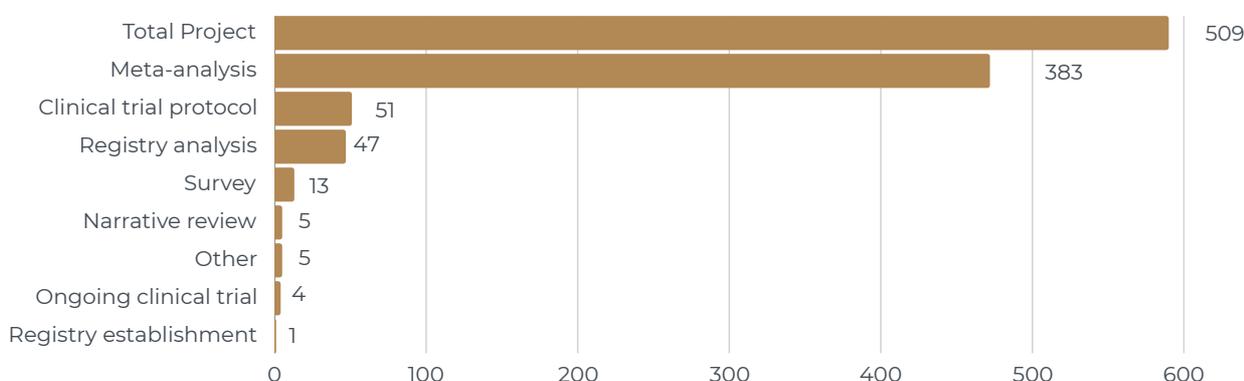


AVERAGE IF	8.618	4.340	4.294	4.965
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# STATISTICS OF STUDENT PUBLICATIONS

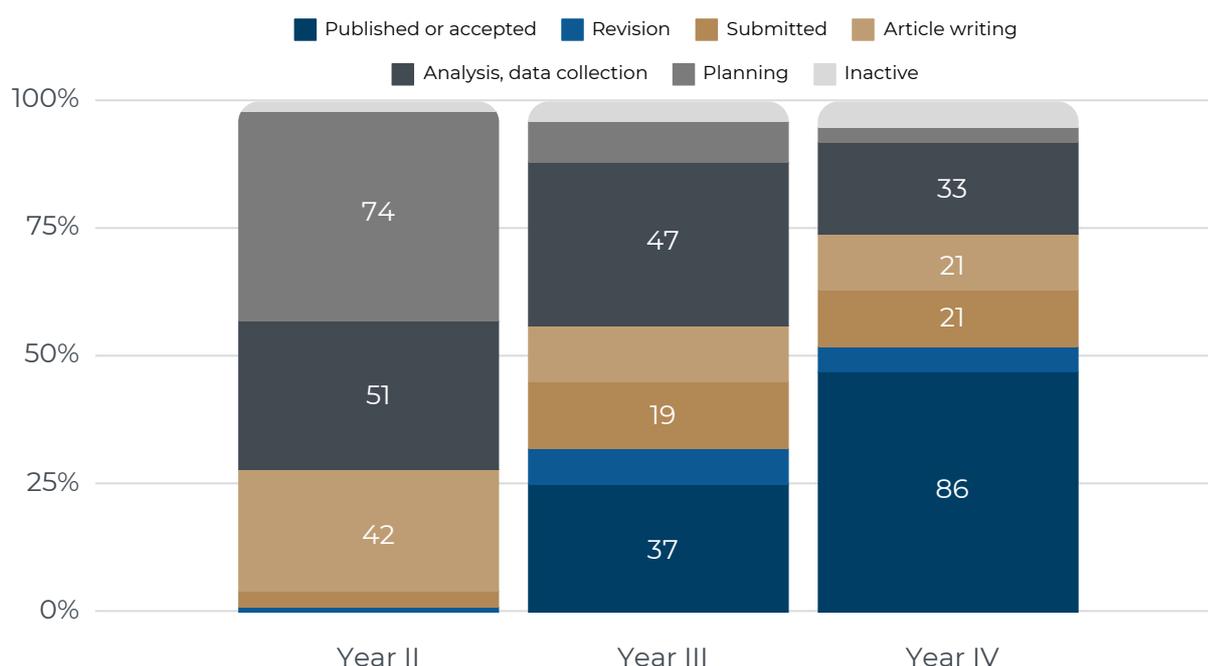
## YEAR II-III-IV PROJECTS



The number of projects is continuously increasing. At the start of the 2024/2025 academic year, there were **590** projects. The highest number of projects were meta-analyses. However, the number of registry analyses and randomized controlled trial protocols are also increasing. On the second figure we present the status of projects separately for Year II and Year III students. Year III students are advancing with their publications, as a high number of projects are already published or submitted. Among Year II projects we can already see a great number of publications. However, second projects are in an incipient phase.

The results of the TM PhD training is also visible in the fact that all the publications by the PhD students were published in journals with at least Q1 ranking. However, almost 40% were published in D1 journals.

## PROJECT STATUS FOR EACH YEAR





# 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.

**2024**

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Systems education can train the next generation of scientists and clinicians  
*Nature Medicine*, IF: **58,7**

Burden of Childhood Cancer and the Social and Economic Challenges in Adulthood  
*JAMA Pediatric*, IF: **24,7**

Magnetic Resonance Imaging in Prostate Cancer Screening: A Systematic Review and Meta-Analysis  
*JAMA Oncology*, IF: **22,5**

Less marginal bone loss around bone-level implants restored with long abutments : A systematic review and meta-analysis  
*Periodontology 2000*, IF: **17,5**

Obesity paradox in older sarcopenic adults - a delay in aging: A systematic review and meta-analysis  
*Ageing Research Reviews*, IF: **12,5**

**2023**

---

Detailed characteristics of post-discharge mortality in acute pancreatitis  
*Gastroenterology*, IF: **29,4**

Extended infusion of  $\beta$ -lactams significantly reduces mortality and enhances microbiological eradication in paediatric patients: a systematic review and meta-analysis  
*eClinicalMedicine*, IF: **9,6**

Procalcitonin-guided antibiotic therapy may shorten length of treatment and may improve survival—a systematic review and meta-analysis  
*Critical Care*, IF: **8,8**

Extracorporeal hemoadsorption in critically ill COVID-19 patients on VV ECMO: the CytoSorb therapy in COVID-19 (CTC) registry  
*Critical Care*, IF: **8,8**

Time-trend treatment effect of Cardiac Resynchronization Therapy with or without Defibrillator on Mortality -A Systematic Review And Meta-Analysis  
*Europace*, IF: **7,9**

2022

---

Alcohol consumption and smoking dose-dependently and synergistically worsen local pancreas damage

*Gut*, IF: **24.5**

Association of Body Mass Index With Clinical Outcomes in Patients With Cystic Fibrosis: A Systematic Review and Meta-analysis

*Jama Network Open*, IF: **13,8**

MIF is a Common Genetic Determinant of COVID-19 Symptomatic Infection and Severity

*QJM-An International Journal Of Medicine*, IF: **13.3**

Dietary supplementation of transient receptor potential vanilloid-1 channel agonists reduces serum total cholesterol level: a meta-analysis of controlled human trials

*Critical Reviews In Food Science And Nutrition*, IF: **10,2**

Clinical Frailty Scale (CFS) indicated frailty is associated with increased in-hospital and 30-day mortality in COVID-19 patients: a systematic review and meta-analysis

*Annals Of Intensive Care*, IF: **8.1**

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 acute pancreatitis

*Gut*, IF: **31,793**

Design and validation of a patient-reported outcome measure scale in acute pancreatitis: the PAN-PROMISE study

*Gut*, IF: **31,793**

Metabolic signature might be an option to identify patients with early CP

*Gut*, 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

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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**

## 2018

---

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**

## 2016

---

Ca<sup>2+</sup> 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

## AWARDS

---

To reward our best performing students and colleagues, we created monthly awards, which means, that based on the given month, the most dedicated and hardworking members are chosen and given a certificate and an engraved glass statue. Throughout the book you will see little badges beside 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 referring to the year and month when the award was received.



**STUDENT**  
of the month



**SUPERVISOR**  
of the month



**GROUP**  
of the month



**SMS**  
of the month



**STATISTICIAN**  
of the month

## ONLINE STUDENT PROFILES

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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.

## PUBLICATIONS

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For those students who already have publications, the articles are shown on their profiles with the name of the journal they're published, the quality and the impact factor as well. In the online version if you click on the title of the publication, you'll be directed to the abstract of the given article.

## DEFENDED STUDENTS

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After submitting two articles, our students are ready to defend their PhD thesis. Besides their pictures if you see this medal, it indicates that the student already successfully defended their thesis. Congratulations to all of them!



# YEAR I.

STARTED IN  
SEPTEMBER 2024

# 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.

### PHASE I

YEAR I



- how to find the most important question
  - how to clarify and simplify the question
  - how to design the project
- 
- everyone has to draft their PhD thesis
  - everyone has to learn HDS-TM methodologies
  - everyone has to reach the start of data extraction/collection

### PHASE I

### PHASE II

YEAR I



- how to write an article
  - how to communicate professionally
  - how to interpret scientific results critically
- 
- everyone is expected to complete their research
  - everyone is expected to show results (there may be exceptions)
  - everyone is expected to present their achievements

### PHASE I

### PHASE II

### PHASE III

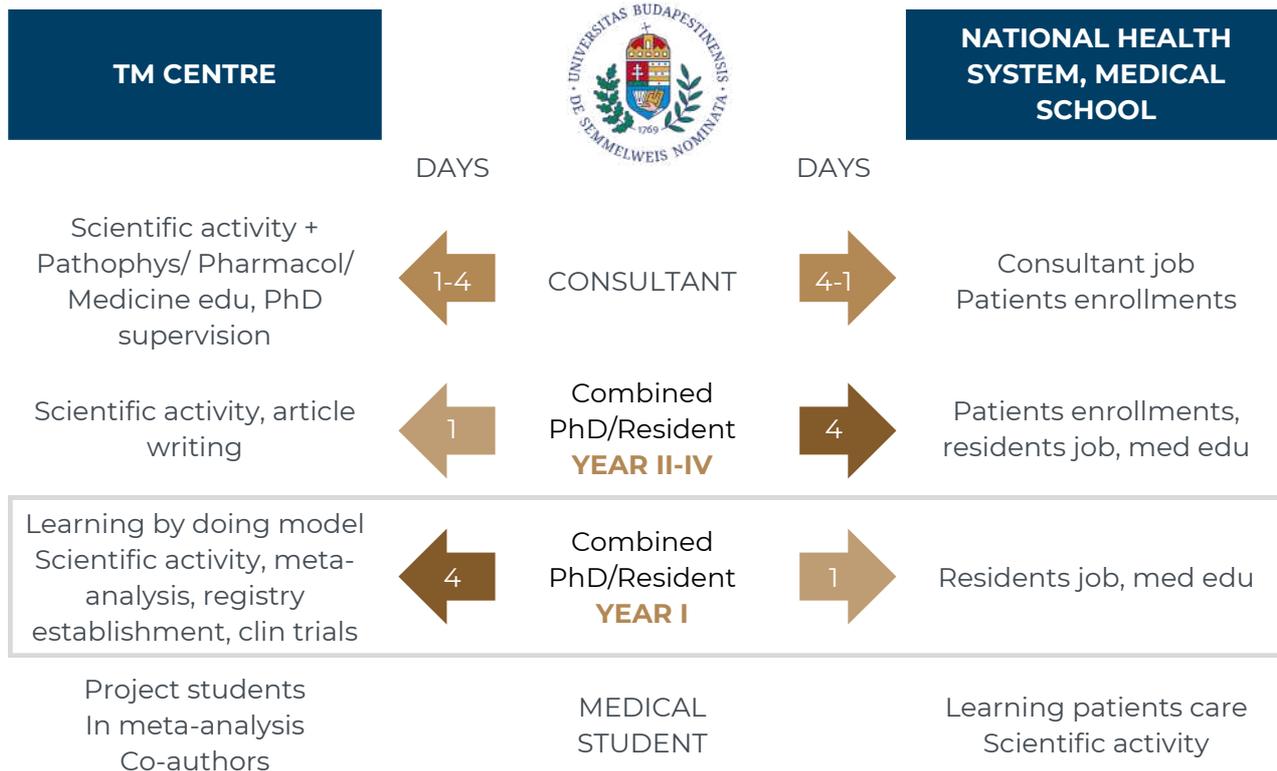
YEAR I



- the opportunity to meet and talk to top researchers
- 
- everyone is expected to complete their search/data summary (there may be exceptions)
  - everyone is expected to present their achievements



- writing-writing-writing
- 
- everyone is expected to complete their first paper (there may be exceptions)
  - everyone is expected to present their achievements



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.

GROUP 1  
**CRITICAL CARE**





# GROUP 1 CRITICAL CARE

## INTRODUCTION TO THE GROUP

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The Critical Care group mainly focuses on anesthesiology, intensive care, emergency medicine, and the physiological/psychological parameters used for the assessment and treatment of these patients. The group is led by the director and vice-director of the Semmelweis University's Department of Anesthesiology and Intensive Therapy, Zsolt Molnár and László Zubek respectively, both long-time collaborators with the CTM.

There are nine students, including two MD-PhD students, from a wide range of clinical expertise. Supervisors and experts of this group include Szabolcs Kéri, the rector of Tokaj-Hegyalja University; Ákos Csomós, the director of the Anesthesiology and Intensive Therapy Unit of the Hospital of the Hungarian Defense Forces; and Endre Zima, the director of the Anesthesiology and Perioperative Patient Care Department of Semmelweis University. The group is supported by two SMS's, Dávid Laczkó and Caner Turan, and biostatistician Szilvia Kiss-Dala.

## MEMBERS OF THE GROUP

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**ZSOLT MOLNÁR**  
*Group Leader*



**LÁSZLÓ ZUBEK**  
*Group Leader*



**DÁVID LACZKÓ**  
*Scientific Methodology  
Supervisor*



**CANER TURAN**  
*Scientific Methodology  
Supervisor*



**SZILVIA KISS-DALA**  
*Statistician*

**STUDENTS:** Péter Bakos, Krisztina Csőke-Kabai, Shir Galin, Julia Hollósi, Liliána Nagy, Gábor Nagy, Tünde Szalay-Frank, Petra Réka Tóth, Zsuzsanna Weber

**SUPERVISORS:** Ákos Csomós, Szabolcs Kéri (Supervisor of the month: **September 2023**), András Lox, András Lovas, Zsolt Molnár, Endre Zima (Supervisor of the month: **April 2022**), László Zubek



## PÉTER BAKOS

VESZPRÉM - ANESTHESIOLOGY AND INTENSIVE THERAPY,  
BALATONFÜRED - CARDIOLOGY



### AGE

34 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zsolt Molnár, András Lovas

### E-MAIL

ifjbakospeti@gmail.com

### TOPIC

Role of Artificial Intelligence in Decision-making for Extubation of Mechanically Ventilated Patients.

### VISION

Healthcare professionals at the bedside relying on data instead of customs and traditions.

### MISSION

Providing evidence on data-driven decision-making in critical care.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the accuracy of machine learning models in predicting extubation success in mechanically ventilated patients: systematic review and meta-analysis.

#### PROJECT 2:

Developing and validating a machine learning model to predict extubation success in mechanically ventilated patients: A Registry Analysis.



## KRISZTINA CSŐKE-KABAI

EMERGENCY MEDICINE RESIDENT AT ALBERT SZENT-GYÖRGYI  
MEDICAL CENTRE, SZEGED



### AGE

32 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zsolt Molnár, László Zubek

### E-MAIL

krisztikabai@gmail.com

### TOPIC

Methods of neuroprotection after cardiac arrest.

### VISION

All resuscitated patients thrive, not just survive.

### MISSION

Driving therapeutic innovations for better quality of life following resuscitation.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of prehospital targeted temperature management on neurological outcome in out-of-hospital cardiac arrest patients: Systematic Review and Meta-analysis

#### PROJECT 2:

Investigating the efficacy and safety of seizure prevention on neurological outcome in cardiac arrest patients: Systematic Review and Meta-analysis.



## SHIR GALIN

ZIV MEDICAL CENTRE TZFAT ISRAEL



### AGE

41 years

### EDUCATION

psychologist

### SUPERVISOR(S)

Szabolcs Kéri

### E-MAIL

shirgalin@gmail.com

### TOPIC

Psychosomatic Dimensions: Integrating Predictive Health Markers and Mind-Body Interactions.

### VISION

Reduced mortality and improved lives through psychology.

### MISSION

Integrating psychological Dimensions into everyday healthcare and policy.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Accuracy in Predicting Depression through Heart Rate Variability in Healthy Population: Systematic Review and Meta-analysis.

#### PROJECT 2:

Exploring the Link between Multiple Sclerosis, Depression and Heart Rate Variability: Protocol of a Prospective Observational Study.



## JÚLIA HOLLÓSI

MD/PHD STUDENT



### AGE

23 years

### EDUCATION

medical student

### SUPERVISOR(S)

Zsolt Molnár, László Zubek

### E-MAIL

julia@hollosi.com

### TOPIC

Role of Immunomodulatory Strategies to Improve Outcomes in Sepsis.

### VISION

Standardized treatments for specific medical situations.

### MISSION

Delineating best treatments and incorporate new technologies into care plans.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the safety and effectiveness of intravenous immunoglobulin treatment versus blood purification in septic patient: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the safety and effectiveness of intravenous immunoglobulin therapy before and after the onset of septic shock: Systematic Review and Meta-analysis.



## GÁBOR NAGY

DEPARTMENT OF EMERGENCY MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

40 years

### EDUCATION

advanced practitioner nurse

### SUPERVISOR(S)

Zsolt Molnár, László Zubek

### E-MAIL

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### TOPIC

Using fluid responsiveness-based treatment to improve early resuscitation in septic patients.

### VISION

Each patient receives the care that is best for them.

### MISSION

Eliminating non-evidence-based data to improve survival in sepsis and septic shock.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the safety and effectiveness of personalized versus fixed-volume resuscitation in septic patients: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effectiveness and safety of immediate vasopressor initiation in patients admitted to the Emergency Department with shock: Protocol for a Randomized Controlled Trial.



## LILIÁNA NAGY

MD/PHD STUDENT



### AGE

24 years

### EDUCATION

medical student

### SUPERVISOR(S)

Zsolt Molnár, László Zubek

### E-MAIL

nagy.liliana3@gmail.com

### TOPIC

The role of advanced hemodynamic monitoring in critically ill patients.

### VISION

Critically ill patients in highest safety.

### MISSION

Using accurate devices for accurate condition assessment.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of advanced versus conventional hemodynamic monitoring in patients with shock: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the efficacy and safety of cardiac output and derived parameters guided therapy in high-risk surgical patients: systematic review and meta-analysis.



## TÜNDE SZALAY-FRANK

HUNGARIAN DEFENSE FORCES MEDICAL CENTRE (ANESTHESIOLOGY AND INTENSIVE CARE MEDICINE)



### AGE

43 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zsolt Molnár, Ákos Csomós

### E-MAIL

szalay.frank.tunde@gmail.com

### TOPIC

The role of regional anesthetic techniques in enhancing recovery after cardiac surgery.

### VISION

Regional anesthetic techniques become part of enhanced recovery guideline in cardiac surgery.

### MISSION

Taking an active part as a researcher and clinician.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the safety and efficacy of additional thoracic fascial plane blocks in patients undergoing cardiac surgery: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effect of additional thoracic fascial plane blocks on the lung function parameters in patients undergoing cardiac surgery: protocol of a randomized controlled trial.



## PETRA RÉKA TÓTH

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

26 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

András Lorx, Zsolt Molnár

### E-MAIL

toth.petra.sh@gmail.com

### TOPIC

Insights to the treatment of invasively ventilated patients.

### VISION

Access to advanced medical technology no matter who you are.

### MISSION

Improving the effectiveness of current technology.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the effectiveness and safety of adaptive versus conventional modes in invasively ventilated patients: systematic review and meta-analysis.

#### PROJECT 2:

Mathematical model-based optimization of mechanical ventilation: protocol of a validation and cohort study.



## ZSUZSANNA WEBER

DEPARTMENT OF ANESTHESIOLOGY AND INTENSIVE THERAPY, SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Endre Zima, László Zubek

### E-MAIL

weberzsuu@gmail.com

### TOPIC

Perioperative management of cardiac medications for non-cardiac surgeries.

### VISION

Standardized yet personalized patient care worldwide.

### MISSION

Contributing to the development of high quality, evidence-based strategies while being effective in patient care.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the safety of continuing renin-angiotensin-aldosterone inhibitors for non-cardiac surgery: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the efficacy and safety of multimodal individual haemodynamic management in patients undergoing major abdominal surgery: protocol of a randomized controlled trial.

GROUP 2  
**DENTISTRY**





# GROUP 2 DENTISTRY

## INTRODUCTION TO THE GROUP

The Dentistry group is committed to advancing dental science through cutting-edge research focused on improving oral health outcomes and dental care methodologies. The group's vision is to enhance the prevention, diagnosis, and treatment of dental and craniomandibular diseases, with a focus on innovative techniques in oral and maxillofacial surgery, periodontal regeneration, endodontics and restorative dentistry. With a multidisciplinary approach, the group also explores the role of oral microbiota in systemic health and the development of biomaterials for dental applications. The group consists of 17 students, including five MD-PhD candidates, all of whom are engaged in various areas of dental research. Their studies cover topics such as maxillofacial surgery, endodontics, pediatric dentistry, temporomandibular disorders and prosthodontics. The group's projects aim to integrate clinical expertise with emerging technologies like digital dentistry, laser and biomedicine.

The group is led by Gábor Varga, Gábor Gerber and János Vág, experts in oral biology and endodontics. The team is also supported by a diverse group of senior specialists and experts in prosthodontics, endodontics, oral and maxillofacial surgery, gnathology, orthodontics, pediatric dentistry, and oral biology. Methodological support is provided by senior scientific methodology supervisors (SMS) Alex Schulze Wenning and Xinyi Qian, alongside junior SMSs Jimin Lee, Dávid Laczkó, Lőrinc Frivaldszky, and Lili Gulyás. The group also includes a dedicated biostatistician, Bence Szabó, ensuring the rigor and accuracy of their clinical research outcomes. Together, they strive to push the boundaries of dental science, improving both the quality of life and care for patients worldwide.

## MEMBERS OF THE GROUP



**GÁBOR VARGA**  
Group Leader



**JÁNOS VÁG**  
Group Leader



**GÁBOR GERBER**  
Group Leader



**ALEXANDER S. WENNING**  
Scientific Methodology  
Supervisor



**XINYI QIAN**  
Scientific Methodology  
Supervisor



**JIMIN LEE**  
Scientific Methodology  
Supervisor



**DÁVID LACZKÓ**  
Scientific Methodology  
Supervisor



**LŐRINC FRIVALDSZKY**  
Scientific Methodology  
Supervisor



**LILI GULYÁS**  
Scientific Methodology  
Supervisor



**BENCE SZABÓ**  
Statistician

**STUDENTS:** Eszter Borbély, Mojtaba Dahmardeh, Mohsen Dianati Samarin, Nazanin Ghods, Ágnes Heizer, Kitti Hohl, György Árpád Keskeny, Mirjam Kisgergely, Katinka Lékó-Kesjár, Ábel Major, Dorottya Német, Adél Pintér, Lili Rozgonyi, Darius-Valentin Sandu, Sára Borbála Szabó, Adrienn Széll, Laura Zsófia Tasi

**SUPERVISORS:** Lili Ács, Anita Beck, Victor Costan, Árpád Joób Fancsaly, Réka Fazekas, Gábor Gerber, Zoltán Gécz, Zsuzsanna Helyes, Tamás Huszár, Gellért Joós Kovács, Szandra Katalin Kovácsné Körmenyi, Kinga Körmőczy, Zsolt Lohinai, Krisztina Márton, Eszter Molnár, Ivett Róth, Noémi Rózsa, Enikő Mária Vasziné Szabó, Gábor Varga, János Vág, Dániel Végh, Tibor Zelles, Ákos Zsembery



## ESZTER BORBÉLY

FULL TIME PHD STUDENT



### AGE

25 years

### EDUCATION

dentist

### SUPERVISOR(S)

Gábor Varga, Lili Ács

### E-MAIL

eszter13borbely@gmail.com

### TOPIC

Dental anomalies and intervention strategies.

### VISION

Setting the standard in dental anomaly management.

### MISSION

Implementing evidence-based practices to address and correct dental irregularities.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Safety and Efficacy of Open versus Closed Surgical Exposure of Impacted Maxillary Canines: Systematic Review and Meta-analysis.

#### PROJECT 2:

Evaluating the Effect of the Different Designs and Materials on the Primary Stability of Orthodontic Mini-Implants: Systematic Review and Meta-Analysis.



## MOJTABA DAHMARDEH

MD/PHD STUDENT



### AGE

30 years

### EDUCATION

dental student

### SUPERVISOR(S)

Zsolt Lohinai, Enikő Mária Vasziné Szabó

### E-MAIL

mojamanten@gmail.com

### TOPIC

Lasers in Endodontics.

### VISION

Zero failure rate in root canal treatment.

### MISSION

Finding the optimal method for root canal disinfection.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of lasers in endodontic treatment: systematic review and meta-analysis.

#### PROJECT 2:

Investigating prevalence rate of different oral bacteria in Alzheimer's disease : a systematic review and meta-analysis.



1 YEAR  
MSC  
PROGRAM

## MOHSEN DIANATI SAMARINI

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

dentist

### SUPERVISOR(S)

Dániel Végh

### E-MAIL

mohsendent69@gmail.com

### TOPIC

Treatment options for periodontitis.

### VISION

A world without periodontitis.

### MISSION

Finding the optimal adjunctive periodontal treatment therapies.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the adjunctive therapy options for periodontitis: systematic review and meta-analysis.

#### PROJECT 2:

-



## NAZANIN GHODS

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

29 years

### EDUCATION

dentist

### SUPERVISOR(S)

Gábor Varga, Tibor Zelles

### E-MAIL

nazanin\_ghods@yahoo.com

### TOPIC

Evidence-based solutions for orthodontic acceleration.

### VISION

Transforming orthodontics with effective, non-surgical solutions.

### MISSION

Delivering evidence-based solutions for orthodontic acceleration.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effectiveness and safety Of Non-invasive Accelerated Orthodontic Techniques: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating The Accuracy of AI-Driven Cephalometric Analysis in Orthodontics: Systematic Review and Meta-analysis.



## ÁGNES HEIZER

DEPARTMENT OF GENERAL DENTAL PRECLINICAL PRACTICE, SEMMELWEIS UNIVERSITY, PROSTHODONTIST RESIDENT



### AGE

26 years

### EDUCATION

dentist

### SUPERVISOR(S)

Krisztina Márton

### E-MAIL

heizagi@gmail.com

### TOPIC

Exploring the Spectrum of Oral Disorders in Different Autoimmune Diseases.

### VISION

Better overview on the course of Sjögren's syndrome.

### MISSION

Reducing the severity of symptoms in Sjögren's syndrome.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Prevalence of Oral Disorders in Sjogren's Syndrome: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the Prevalence of Oral Disorders in Systemic Lupus Erythematosus: Systematic Review and Meta-analysis.



## KITTI HOHL

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

24 years

### EDUCATION

dentist

### SUPERVISOR(S)

Ákos Zsembrey, Zsuzsanna Helyes

### E-MAIL

kitti.hohl.2000@gmail.com

### TOPIC

Relationship between Oral Dysbiosis and Hepatopancreatic and Biliary System.

### VISION

Reduced incidence of hepatopancreatic and biliary system diseases by appropriate periodontitis management.

### MISSION

Determining causal link between chronic periodontitis and disorders of hepatopancreatic and biliary system.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Prevalence of Hepatopancreatic and Biliary diseases in Oral Dysbiosis: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the Progression of Medication Related Osteonecrosis of the Jaw: Systematic Review and Meta-analysis.



## GYÖRGY ÁRPÁD KESKENY

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

25 years

### EDUCATION

dentist

### SUPERVISOR(S)

Ivett Róth

### E-MAIL

keskeny.gyorgy@stud.semmelweis.hu

### TOPIC

Investigating the Effectiveness of Different Intraoral Scanners.

### VISION

Highly accurate dental restorations.

### MISSION

Advancing the precision, efficiency and accessibility of intraoral scanning.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing Efficiency of Intraoral Scanning Technologies for Implant Impressions: Systematic Review and Meta-analysis.

#### PROJECT 2:

Teledentistry – A future solution in the detection of caries: systematic review and meta-analysis.



## MIRJAM KISGERGELY

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

dentist

### SUPERVISOR(S)

Gellért Joós Kovács

### E-MAIL

kisgergely.mirjam@semmelweis.hu

### TOPIC

Accuracy of fixed dentures and its effect to bearing time.

### VISION

Longer lasting dental restorations to patients.

### MISSION

Exploring the ways to produce more accurate fixed dental prostheses.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the accuracy of dental milling machines in fabricating fixed dentures: a systematic review and meta-analysis.

#### PROJECT 2:

Comparing the accuracy of dental milling machines in fabricating crowns: an in vitro study.



## KATINKA LÉKÓ-KESJÁR

DEPARTMENT OF RESTORATIVE DENTISTRY AND ENDODONTICS, SEMMELWEIS UNIVERSITY



### AGE

32 years

### EDUCATION

dentist

### SUPERVISOR(S)

János Vág, Eszter Molnár

### E-MAIL

kesjar.katinka@semmelweis.hu

### TOPIC

The role of probiotics in caries prevention.

### VISION

Better oral health using alternative methods.

### MISSION

Exploring new strategies in caries prevention.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effectiveness and safety of probiotics in preventing caries: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effectiveness and safety of herbal oral care products in caries development: a systematic review and meta-analysis.



## ÁBEL MAJOR

MD/PHD STUDENT



### AGE

26 years

### EDUCATION

dental student

### SUPERVISOR(S)

Gábor Gerber, Árpád Joób Fancsaly

### E-MAIL

majorabel87@gmail.com

### TOPIC

Control of fear memories and management of dental anxiety.

### VISION

Less anxious patients in the dental office.

### MISSION

Providing data for policy makers to create guidelines.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of herbal preparations on anxiety in patients undergoing dental treatment: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the oral health status in patients with congenital heart defects: Systematic Review and Meta-analysis.



## DOROTTYA NÉMET

BAJCSY-ZSILINSZKY HOSPITAL AND CLINIC, PHYSICAL THERAPIST



### AGE

27 years

### EDUCATION

dentist

### SUPERVISOR(S)

Máté Jász,  
Szandra Katalin Kovácsné Körmendi

### E-MAIL

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### TOPIC

Correlations of Temporomandibular Disorders with body position and posture.

### VISION

Improved diagnostic accuracy and quality of treatment for Temporomandibular Disorders patients.

### MISSION

Exploring physiotherapeutic interventions for the management of Temporomandibular Disorders in affected patients.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the prevalence rate of Forward Head Posture among patients with Temporomandibular Disorders: a systematic review and meta-analysis.

#### PROJECT 2:

Comparing the effectiveness of online vs. face-to-face physiotherapy of Temporomandibular Disorders: a randomized clinical trial.



## ADÉL PINTÉR

MD/PHD STUDENT



### AGE

23 years

### EDUCATION

dental student

### SUPERVISOR(S)

Gábor Gerber, Gábor Varga

### E-MAIL

adel.pinter@stud.semmelweis.hu

### TOPIC

Novel approaches in conventional orthodontics.

### VISION

Orthodontics as a pleasant treatment option for patients.

### MISSION

Identifying the safest and most effective techniques for accelerated tooth movement.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effectiveness and safety of micro-osteoperforations in accelerated orthodontics: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the stability and survival of fixed retainers of different manufacturing methods: systematic review and meta-analysis.



## LILI ROZGONYI

DEPARTMENT OF PEDIATRIC DENTISTRY AND ORTHODONTICS,  
SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

dentist

### SUPERVISOR(S)

Noémi Rózsa, Anita Beck

### E-MAIL

lilirozgonyi@gmail.com

### TOPIC

Dental Management of Children with Special Needs.

### VISION

All children in special care are smiling.

### MISSION

Evaluating the effectiveness of alternative dental management in case of children with special needs.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Effect of Alternative Distraction Techniques and Dental Environments for Children with Neurodevelopmental Disorders: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the Effectiveness of Visual Oral Health Educational Techniques for Hearing Impaired Children: Systematic Review and Meta-analysis.



## DARIUS-VALENTIN SANDU

FULL TIME PHD STUDENT



### AGE

25 years

### EDUCATION

dentist

### SUPERVISOR(S)

Gábor Gerber, Victor Costan

### E-MAIL

darius\_valentin2@yahoo.com

### TOPIC

The value of digital technologies in orthognathic surgery.

### VISION

Best orthognathic surgery outcome by virtual planning.

### MISSION

Finding the best surgical planning approach/strategy/protocol.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effectiveness of Patient-Specific Implants over Splints in Orthognathic Surgery: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the Effectiveness of Fully Digital Occlusion Planning over Physical Dental Model Approach in Orthognathic Surgery: Systematic Review and Meta-analysis.



## SÁRA BORBÁLA SZABÓ

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

24 years

### EDUCATION

dentist

### SUPERVISOR(S)

Réka Fazekas, Zsuzsanna Helyes

### E-MAIL

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### TOPIC

Combined anti-angiogenic and anti-resorptive treatments in bone cancer patients.

### VISION

Prolonged survival and improved quality of life in bone cancer patients.

### MISSION

Assessing the benefits and risks of combined anti-angiogenic and anti-resorptive therapy in bone cancer patients.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of combined anti-angiogenic and anti-resorptive treatments in bone cancer patients: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the risk factors of medication related osteonecrosis of the jaw: retrospective observational study.



## ADRIENN SZÉLL

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

dentist

### SUPERVISOR(S)

Zoltán Gécz

### E-MAIL

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### TOPIC

Oral health of patients with eating disorders.

### VISION

Improved recovery rates for patients with eating disorders.

### MISSION

Assessing oral cavity differences between patients with and without eating disorders.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the prevalence of oral conditions in patients with and without eating disorders: a systematic review and meta-analysis.

#### PROJECT 2:

Comparing the oral health status of patients with and without eating disorders in Hungary: a prospective observational study.



## LAURA ZSÓFIA TASI

MD/PHD STUDENT



### AGE

23 years

### EDUCATION

dental student

### SUPERVISOR(S)

Tamás Huszár, Kinga Körmöczy

### E-MAIL

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### TOPIC

Prosthodontic perspective of mandibular reconstruction methodologies

### VISION

Patients undergoing mandibular reconstruction receive the best possible dental prosthetics.

### MISSION

Providing evidence-based guidelines that optimize mandibular reconstruction.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the success rate and safety of primary and secondary implantation in patients undergoing mandibular reconstruction: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the safety and effectiveness of hydrophilic and hydrophobic implant surfaces in irradiated jaws: systematic review and meta-analysis.

GROUP 3

# GYNECOLOGY & UROLOGY





# GROUP 3 GYNECOLOGY & UROLOGY

## INTRODUCTION TO THE GROUP

The Gynecology-Urology Group is dedicated to advancing research in gynecologic and plastic surgical interventions, as well as in the prevention and treatment of pregnancy complications, infertility, infectious diseases, and cancers within the urological and gynecological fields. The group is led by Nándor Ács, Director of the Department of Obstetrics and Gynecology of Semmelweis University, and Péter Nyirády, Dean of the Faculty of Medicine. The team includes a number of expert supervisors: Balázs Lintner, Zsolt Melczer, Levente Sára, Sándor Valent, Ferenc Bánhid, Márton Keszthelyi, Attila Bokor, and Miklós Sipos from the Department of Obstetrics and Gynecology; Tibor Szarvas, Gergely Bánfi from the Department of Urology; and Zoltán Klárik from the Department of Surgery, Transplantation, and Gastroenterology.

The group consists of 14 PhD students, including six MD-PhD candidates and eight medical doctors specializing in obstetrics and gynecology, urology, and surgery. Junior scientific methodology supervisors are Isabel Amorim and Lőrinc Frivaldszky, while senior supervisors are Anett Rancz and Mahmoud Obeidat. Biostatistical support is provided by Mikolt Bakony.

## MEMBERS OF THE GROUP

**NÁNDOR ÁCS**  
Group Leader  
09/23  
05/24

**PÉTER NYIRÁDY**  
Group Leader  
03/22

**ANETT RANCZ**  
Scientific Methodology Supervisor  
06/22  
06/23  
01/24

**MAHMOUD OBEIDAT**  
Scientific Methodology Supervisor  
07/23  
11/22  
09/23  
03/24

**ISABEL AMORIM**  
Scientific Methodology Supervisor  
02/24

**LŐRINC FRIVALDSZKY**  
Scientific Methodology Supervisor  
01/24

**MIKOLT BAKONY**  
Statistician  
09/23

**STUDENTS:** Dániel Bacsó, Botond Boldizsár Bényi, Máté Szabolcs Botos, Levente Doleviczényi, Dóra Léna Fedorcsák, Tímea Gabriella Hercsik, Soma László Jávor, Begüm Kepkep, Dávid Márai, Péter Pál, Anita Gréta Perényi, Anikó Katalin Valikovics, Róbert Vass, Ádám Vincze

**SUPERVISORS:** Nándor Ács, Gergely Bánfi, Ferenc Bánhid, Attila Bokor, Márton Keszthelyi, Zoltán Klárik, Balázs Lintner, Zsolt Melczer, Levente Sára, Miklós Sipos, Tibor Szarvas (Supervisor of the month: December 2022, May 2023), Tamás Széll, Sándor Valent



## DÁNIEL BACSÓ

MD/PHD STUDENT



### AGE

24 years

### EDUCATION

medical student

### SUPERVISOR(S)

Tibor Szarvas

### E-MAIL

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### TOPIC

New Horizons for Treatment of Urachal Cancer

### VISION

Innovative treatment options for urachal cancer.

### MISSION

Providing a comprehensive overview of urachal cancer treatment experiences.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the Efficacy of Different Systemic Therapies of Urachal Cancer: systematic review and meta-analysis

#### PROJECT 2:

Investigating the safety and efficacy of surgery combined with chemotherapy in metastatic urachal cancer: systematic review and meta-analysis.



## BOLDIZSÁR BOTOND BÉNYI

MD/PHD STUDENT



### AGE

24 years

### EDUCATION

medical student

### SUPERVISOR(S)

Nándor Ács, Attila Bokor

### E-MAIL

benyi.botond@stud.semmelweis.hu

### TOPIC

Surgical options for bowel resection in intestinal lesions.

### VISION

Improved quality of life in patients who suffer from benign intestinal lesions

### MISSION

Finding the most effective surgical technique for the treatment of benign intestinal lesions.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the safety and efficacy of NOSE in the treatment of benign intestinal lesions: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the safety and efficacy of NOSE in the treatment of benign uterine and adnexal lesions: systematic review and meta-analysis.



## MÁTÉ SZABOLCS BOTOS

FEJÉR COUNTY SZENT GYÖRGY UNIVERSITY TEACHING HOSPITAL



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Miklós Sipos

### E-MAIL

botosmatel4@gmail.com

### TOPIC

Adenomyosis and infertility.

### VISION

Improved pregnancy outcomes for women with adenomyosis.

### MISSION

Finding the most effective assisted reproduction protocol for infertile women with adenomyosis.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of GnRH agonist pretreatment before frozen embryo transfers in women with adenomyosis: systematic review and meta-analysis.

#### PROJECT 2:

Comparing the efficacy and safety of fertility-sparing treatment options for adenomyosis: systematic review and meta-analysis.



## LEVENTE DOLEVICZÉNYI

DEPARTMENT OF SURGERY, TRANSPLANTATION AND GASTROENTEROLOGY, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zoltán Klárik

### E-MAIL

levente.dole@gmail.com

### TOPIC

Post-operative quality of life in breast cancer patients.

### VISION

Improved post-operative quality of life of women with breast cancer.

### MISSION

Assessing the different available surgical techniques and strategies in breast cancer.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of steroids in the prevention of seroma formation after mastectomies: systematic review and meta-analysis.

#### PROJECT 2:

Comparing the efficacy and safety of different techniques in reducing donor site morbidity after latissimus dorsi muscle harvest: systematic review and meta-analysis.



## DÓRA LÉNA FEDORCSÁK

MD/PHD STUDENT



### AGE

22 years

### EDUCATION

medical student

### SUPERVISOR(S)

Zoltán Klárik

### E-MAIL

dorafedorcsak@gmail.com

### TOPIC

Optimizing Techniques and Outcomes in Implant-Based Breast Reconstruction.

### VISION

Breast cancer patients having the best possible surgical care.

### MISSION

Determining which adjunctive materials can help achieve a better surgical and aesthetic outcome.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Effect of Adjunctive Materials on Implant-Based Breast Reconstruction Outcomes in Irradiated Patients: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the efficacy and safety of NPWT in the prevention and salvage of complications in prosthetic breast reconstruction: systematic review and meta-analysis.



## TÍMEA GABRIELLA HERCSIK

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Ferenc Bánhidly

### E-MAIL

hercsik.tim@gmail.com

### TOPIC

Oral Contraceptives and Cancer Risk.

### VISION

Lower rates of hematological malignancies.

### MISSION

Providing preventive measures for hematological cancers.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Effect of Oral Contraceptive Use on the Risk of Hematological Cancers: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the Effect of Oral Contraceptive Use on the Risk of Lung Cancer: Systematic Review and Meta-analysis.



## SOMA LÁSZLÓ JÁVÖR

MD/PHD STUDENT



### AGE

26 years

### EDUCATION

medical student

### SUPERVISOR(S)

Ferenc Bánhidly

### E-MAIL

javor.soma@stud.semmelweis.hu

### TOPIC

Effect of Breast Implants on Breast Cancer.

### VISION

Improved, unified breast cancer screening program for individuals with breast implants.

### MISSION

Providing evidence on the effect of intramammary lymph node metastasis.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the Prognosis of Breast Cancer Patients With or Without Intramammary Lymph Node Metastasis: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the metastatic potential of intramammary lymph nodes in the breast in the absence of axillary lymph node involvement: an observational study.



## BEGÜM KEPKEP

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

24 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Miklós Sipos

### E-MAIL

kepkepbegum@gmail.com

### TOPIC

Assisted reproductive technology.

### VISION

Decreased psychological burden on couples during assisted reproduction.

### MISSION

Finding safe and effective techniques to increase the success of assisted reproduction.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of oocyte gene mutations on total oocyte fertilization failure in assisted reproductive technology: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effect of antioxidants in IVF media on fertility outcomes during assisted reproductive technology: systematic review and meta-analysis.



## DÁVID MÁRAI

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Sándor Valent

### E-MAIL

dr.maraidavid@gmail.com

### TOPIC

New horizons on the prediction of preeclampsia.

### VISION

Reduced maternal and fetal morbidity and mortality.

### MISSION

Providing proper and early diagnosis and treatment for severe preeclampsia.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the predictive value of microRNA-210 on the severity of preeclampsia in pregnant women: systematic review and meta-analysis.

#### PROJECT 2:

Investigating free fatty acid levels as protective or risk factors for preeclampsia in pregnant women: systematic review and meta-analysis.



## PÉTER PÁL

MD/PHD STUDENT



### AGE

24 years

### EDUCATION

medical student

### SUPERVISOR(S)

Levente Sára

### E-MAIL

petrpal2000@gmail.com

### TOPIC

Functionality and Aesthetics in Plastic Surgery.

### VISION

Maximized patient health and satisfaction in plastic surgery.

### MISSION

Identifying and implementing the safest, most effective plastic surgical procedures.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the safety and efficacy of different scar treatments: systematic review and meta-analysis.

#### PROJECT 2:

Comparison of Treatments in the Prevention of Postoperative Pathological Scarring: Systematic Review and Meta-analysis.



## ANITA GRÉTA PERÉNYI

INSTITUTE OF PANCREATIC DISEASES, SEMMELWEIS UNIVERSITY



### AGE

33 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Nándor Ács, Zsolt Melczer

### E-MAIL

greta.perenyi@gmail.com

### TOPIC

Assessment of nutritional habits of pregnant women.

### VISION

Normalize gestational diabetes with lifestyle medicine, nutritional counseling.

### MISSION

Identifying the dietary factors modulating the therapeutic response in this population.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of PUFA supplementation on carbohydrate metabolism parameters among gestational diabetic patients: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effects of diet composition and micronutrient intake on carbohydrate metabolism parameters and the development of GDM in pregnant women: an observational study.



## ANIKÓ KATALIN VALIKOVICS

DEPARTMENT OF UROLOGY, SEMMELWEIS UNIVERSITY



### AGE

34 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Tibor Szarvas

### E-MAIL

avalikovics3@gmail.com

### TOPIC

Systemic Treatment of Metastatic Prostate Cancer.

### VISION

Patients having the best treatment option for metastatic prostate tumor.

### MISSION

Finding the drug that significantly improves the quality of life of prostate cancer patients.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of abiraterone and enzalutamide in patients with metastatic prostate cancer: a systematic review and meta-analysis.

#### PROJECT 2:

Identifying patients with metastatic prostate cancer who benefit from prostate-specific membrane antigen radioligand therapy: a systematic review and meta-analysis.



## RÓBERT VASS

DEPARTMENT OF UROLOGY, SEMMELWEIS UNIVERSITY



### AGE

25 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Gergely Bánfi, Tamás Széll

### E-MAIL

robertvassjr@gmail.com

### TOPIC

Inflammatory processes of the urinary tract and its association with genitourinary cancers.

### VISION

Reduced incidence of genitourinary cancers.

### MISSION

Identifying risk factors for genitourinary cancers.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of lower urinary tract infections on the incidence rate of bladder cancer in women: systematic review and meta-analysis.

#### PROJECT 2:

Comparing the composition of the urinary microbiome in bladder cancer patients and healthy individuals: systematic review and meta-analysis.



## ÁDÁM VINCZE

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Balázs Lintner, Márton Keszthelyi

### E-MAIL

vincze\_adam@hotmail.com

### TOPIC

Fertility sparing treatments in gynecological cancers.

### VISION

Women can keep their ability to reproduce even after the appropriate oncological treatment.

### MISSION

Finding the best fertility sparing treatment for gynecological cancer patients.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of the fertility sparing treatment in early stage cervical cancer  $\geq 2$  cm: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the efficacy and safety of the fertility sparing treatment in early endometrial cancer and endometrial intraepithelial neoplasia: systematic review and meta-analysis.

GROUP 4  
**GASTROENTEROLOGY**





# GROUP 4

## GASTROENTEROLOGY

### INTRODUCTION TO THE GROUP

The Gastroenterology group, led by Tibor Gyökeres and Péter Jenő Hegyi, is dedicated to advancing the understanding and treatment of gastrointestinal and pancreatic diseases through cutting-edge, multidisciplinary research. Their projects address a broad spectrum of critical topics, from optimizing surgical outcomes in inflammatory bowel disease and evaluating novel therapeutic strategies for pancreatic cancer, to improving the diagnostic accuracy of pancreatic neoplasms. They are also investigating the effects of exclusive enteral nutrition, the integration of renal transplant therapies in Insulin-dependent DM patients, and the prevalence of gastrointestinal disorders in patients with eating disorders. Utilizing advanced techniques like ROSE/MOSE, PET/MRI, and ERCP-guided diagnostics, we are committed to enhancing prognostic precision and therapeutic efficacy, with the ultimate goal of improving healthcare outcomes.

The dynamic team includes 13 PhD students, supported by a distinguished group of 10 professors and clinicians. In addition, they benefit from the expertise of two junior scientific methodology supervisors, Amir Makolli and Jimin Lee, a senior scientific methodology expert, Mahmoud Obeidat, and biostatistician Andrea Harnos. Together, their aim is to push the boundaries of gastroenterological research and deliver meaningful clinical advancements.

### MEMBERS OF THE GROUP



**TIBOR GYÖKERES**  
Group Leader



**PÉTER JENŐ HEGYI**  
Group Leader



**MAHMOUD OBEIDAT**  
Scientific Methodology Supervisor



**AMIR MAKOLLI**  
Scientific Methodology Supervisor



**JIMIN LEE**  
Scientific Methodology Supervisor



**DALMA KÖVES-DOBSZAI**  
Scientific Methodology Supervisor



**ANDREA HARNOS**  
Statistician

**STUDENTS:** Vivien Szilvia Balla, Zoltán Imre Bánfalvi, Dóra Demeter, Benedek Kasza, Gergely Kollányi, Arnold Marchis, Réka Meszéna, Zsófia Németh, Sándor Orbán, Melinda Piri, Zsófia Román, Tamás Tölgyes, Kálmán János Zsigmond

**SUPERVISORS:** Márta Balaskó, Adrienn Bíró, Stefania Bunduc, Attila Bursics, Orsolya Dohán, Bálint Eröss (Supervisor of the month: **January 2022**), Petra Anna Golovics, Tibor Gyökeres, Péter Hegyi, Péter Jenő Hegyi, Zsolt Káposztás, Andrea Szentesi (Supervisor of the month: **December 2023**), Szilárd Váncsa



## VIVIEN SZILVIA BALLA

SOMOGY COUNTY KAPOSÍ MÓR TEACHING HOSPITAL



### AGE

26 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zsolt Káposztás, Adrienn Bíró

### E-MAIL

ballavivi@gmail.com

### TOPIC

PET/MRI in Pancreatic Cancer: Advancing Prognostication.

### VISION

Improved pancreatic cancer survival.

### MISSION

Looking for the best imaging modalities to improve treatment and surgical outcomes in pancreatic cancer.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Prognostic Accuracy of PET/MRI on Resectability of Pancreatic Cancer: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the Predictive Accuracy of PET/MRI on Resectability of Pancreatic Cancer: Retrospective Cohort Analysis.



## ZOLTÁN IMRE BÁNFALVI

INSTITUTE OF PANCREATIC DISEASES, SEMMELWEIS UNIVERSITY



### AGE

25 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Jenő Hegyi

### E-MAIL

banfalvi.zoltan11@gmail.com

### TOPIC

Diagnostics of Pancreatic Neoplasms.

### VISION

Patients with suspected pancreatic neoplasias should be diagnosed as early and efficiently as possible.

### MISSION

Identifying the most reliable and accurate diagnostic methods.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the Diagnostic Accuracy of EUS-FNB to On-site Evaluations in the Diagnostics of Pancreatic Neoplasias: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the Effectiveness of DOAC and LWMH Therapies in the Treatment of Splanchnic Venous Thrombosis in Acute Pancreatitis Patients after Discharge: Study Protocol for a Multicentered Randomised Non-inferiority Trial.



## DÓRA DEMETER

HUNGARIAN DEFENSE FORCES MEDICAL CENTRE, GASTROENTEROLOGY



### AGE

29 years

### EDUCATION

dietitian

### SUPERVISOR(S)

Tibor Gyökeres, Petra Anna Golovics

### E-MAIL

dora.de.dora@gmail.com

### TOPIC

The role of exclusive enteral nutrition in inflammatory bowel diseases.

### VISION

Effective nutritional therapies in inflammatory bowel disease.

### MISSION

Providing better nutritional care for patients worldwide.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of exclusive enteral nutrition on surgical outcomes in inflammatory bowel disease: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effect of liraglutide on disease activity and body weight in obese inflammatory bowel disease patients: randomized controlled trial.



## BENEDEK KASZA

INSTITUTE FOR TRANSLATIONAL MEDICINE, UNIVERSITY OF PÉCS



### AGE

32 years

### EDUCATION

biotechnologist

### SUPERVISOR(S)

Péter Hegyi, Márta Balaskó

### E-MAIL

kasza.benedek@pte.hu

### TOPIC

The role of lifestyle factors in acute pancreatitis.

### VISION

Improved outcome in pancreatic diseases by a multi-faceted lifestyle approach.

### MISSION

Identifying the major lifestyle risk factors to create preventive recommendations.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effects of modifiable lifestyle factors on the incidence of acute pancreatitis: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the correlation between the incidence of lifestyle factors and the incidence of acute pancreatitis in European countries (Eurostat analysis).



## GERGELY KOLLÁNYI

ST. IMRE TEACHING HOSPITAL, BUDAPEST



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Bálint Eröss, Szilárd Vánca

### E-MAIL

gkollanyi@gmail.com

### TOPIC

Increasing the effectiveness of ERCP.

### VISION

Patients having comfort and the best possible care.

### MISSION

Improving the safety and efficacy of endoscopic procedures.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of ERCP guided biliary and pancreatic brush cytology in pancreatic cancer: systematic review and meta-analysis.

#### PROJECT 2:

Comparing the efficacy of transpapillary drainage and other interventions for pancreatic pseudocysts: systematic review and meta-analysis



## ARNOLD MARCHIS

FULL TIME PHD STUDENT



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Bálint Eröss, Szilárd Vánca

### E-MAIL

amarchis@outlook.com

### TOPIC

New perspectives on transplantation in the treatment of cancer.

### VISION

Diabetic patients having the best medical and surgical options with improved level of healthcare offered in Eastern Europe et plus.

### MISSION

Learning from the best in the field, find knowledge gaps, improve current standards and policies for treatment of diabetes.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Effect of New Therapeutic Modalities on Glucose Metabolism in Patients with T1DM undergoing Renal Transplant: Systematic Review and Meta-analysis.

#### PROJECT 2:

Comparing Liver Transplantation to Standard of Care in Unresectable Cases of Primary Cancer or Hepatic Metastasis: Systematic Review and Meta-analysis.



## RÉKA MESZÉNA

INSTITUTE FOR TRANSLATIONAL MEDICINE, UNIVERSITY OF PÉCS



### AGE

29 years

### EDUCATION

biologist

### SUPERVISOR(S)

Péter Hegyi, Márta Balaskó

### E-MAIL

meszena.reka@pte.hu

### TOPIC

The role of gut microbiome in acute pancreatitis.

### VISION

Achieve the lowest morbidity and mortality in acute pancreatitis possible.

### MISSION

Assessing gut microbiome profile of acute pancreatitis patients to create new treatment strategies.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the gut microbiome diversity in different severity levels of acute pancreatitis and healthy controls: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effect of microbiome diversity on sepsis development in acute pancreatitis: a prospective observational study.



## ZSÓFIA NÉMETH

INSTITUTE OF PANCREATIC DISEASES, SEMMELWEIS UNIVERSITY



### AGE

25 years

### EDUCATION

psychologist

### SUPERVISOR(S)

Péter Hegyi, Andrea Szentesi

### E-MAIL

nemethzsofi.mail@gmail.com

### TOPIC

Eating Disorders and Gastrointestinal Diseases.

### VISION

All patients with eating disorders receive comprehensive, integrated care to ensure their effective recovery.

### MISSION

Improving the understanding of the link between eating disorders and gastrointestinal health for better patient care.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Prevalence of Gastrointestinal Diseases among Patients with Eating Disorders: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating Diabetes Preventive Lifestyle Interventions after Pancreatitis: Protocol Registration



## SÁNDOR ORBÁN

TIRGU MURES EMERGENCY CLINICAL COUNTY HOSPITAL



### AGE

26 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Orsolya Dohán

### E-MAIL

orban.sandor998@gmail.com

### TOPIC

New insights on the treatment of metastatic pancreatic neuroendocrine tumors.

### VISION

Advanced treatment of pancreatic neuroendocrine tumors, and improved survival and quality of life.

### MISSION

Finding the best combination and sequence of treatment modalities for pancreatic neuroendocrine tumors with liver metastases.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the safety and effectiveness of surgical excision of primary tumor in well-differentiated metastatic PNET: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the safety and effectiveness of surgical excision of primary tumor in well-differentiated metastatic PNET: a SEER Registry Analysis.



## MELINDA PIRI

MARKUSOVSZKY TEACHING HOSPITAL, SZOMBATHELY



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Orsolya Dohán

### E-MAIL

piri.melinda1106@gmail.com

### TOPIC

Novel Approaches in Treating Pancreatic Ductal Adenocarcinoma.

### VISION

Pancreatic ductal adenocarcinoma (PDAC) becomes a curable or a chronic disease.

### MISSION

Finding treatment options to enhance survival rates in PDAC.

### SPECIFIC GOALS

#### PROJECT 1:

Evaluating the efficacy of multimodal treatments in oligometastatic PDAC: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effectiveness of targeted therapies in metastatic PDAC: systematic review and meta-analysis.



## ZSÓFIA ROMÁN

INSTITUTE OF PANCREATIC DISEASES, SEMMELWEIS UNIVERSITY



### AGE

26 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Hegyi, Stefania Bunduc

### E-MAIL

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### TOPIC

Risk Factors for Pancreatic Cancer.

### VISION

Improved prognosis of pancreatic cancer, saving years of life lost.

### MISSION

Exploring the association between glucose metabolism alterations and diagnosis of pancreatic cancer.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Effect of Hemoglobin A1c Level on the Onset and Risk of Pancreatic Cancer: Systematic Review and Meta-analysis.

#### PROJECT 2:

Comparing the Patient Characteristics and Natural History of Early and Late Onset Pancreatic Cancer: Systematic Review and Meta-analysis.



## TAMÁS TÖLGYES

DEPARTMENT OF SURGERY AND SURGICAL ONCOLOGY, UZSOKI TEACHING HOSPITAL



### AGE

33 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Attila Bursics

### E-MAIL

tolgyestamas5@gmail.com

### TOPIC

Role of Neoadjuvant Therapy in Pancreatic Cancer.

### VISION

To investigate the different therapeutic modalities in resectable pancreatic cancer.

### MISSION

Providing the most effective treatment to patient's with pancreatic cancer.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the Effectiveness of Neoadjuvant Chemotherapy to Upfront Surgery in Resectable Pancreatic Cancer: Systematic Review and Meta-Analysis

#### PROJECT 2:

Investigating the Effect of Prognostic Factors on Overall Survival following Pancreatic Surgery: Cohort Analysis.

**AGE**

33 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Tibor Gyökeres

**E-MAIL**

zsigmondkalman@gmail.com

## KÁLMÁN JÁNOS ZSIGMOND

HUNGARIAN DEFENSE FORCES MEDICAL CENTRE

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**TOPIC**

Antibiotic Prophylaxis For ERCP.

**VISION**

Increase the safety of ERCP.

**MISSION**

Performing research to understand how to prepare the patients properly for ERCP to decrease the rate of adverse events.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the safety and effectiveness of antibiotic prophylaxis for ERCP: systematic review and meta-analysis.

**PROJECT 2:**

Investigating the effectiveness of antibiotic prophylaxis in patients with malignant biliary obstruction undergoing ERCP: randomized controlled trial.

GROUP 5

# DERMATOLOGY- PEDIATRICS





# GROUP 5

## DERMATOLOGY-PEDIATRICS

### INTRODUCTION TO THE GROUP

The Dermatology-Pediatrics group focuses on two major fields of medicine. One part of the group focuses on research topics related to psycho-dermatology, surgical management of skin diseases, novel imaging techniques in dermato-oncology, modern biologics in chronic inflammatory skin diseases, and microbiome modulation. The other part of the group is dedicated to advancing research in the field of biomarkers in IgA vasculitis, in children with neonatal encephalopathy and in children with neuroimmune or neuroinfectious disorders. They also investigate the effects of psychotherapy in inflammatory bowel disease patients and optimal nutrition of critically ill children.

The group is led by three experts, two from the field of dermatology: András Bánvölgyi and Norbert Kiss. Both of them are assistant professors in the Department of Dermatology, Venereology and Dermatooncology, Semmelweis University. The third expert leader is Csaba Lódi, head of the Intensive Care Unit at the Bókay Street Department, Pediatric Centre, Semmelweis University. Experts and supervisors of this group include Péter Holló, Norbert Wikonkál, Kende Lőrincz, Lajos Kemény, Fanni Meznerics, Katalin Müller, Miklós Szabó, Magdalena Starcea, Zoltán Liptai, János Major, Zsuzsanna Varga and Anett Ragó. There are 12 PhD students, two of them are MD-PhD students. Besides the two medical students, there are nine medical doctors and one cognitive psychologist.

Three scientific methodology supervisors are responsible for this group: Lili Gulyás, Katalin Martyin and Márk Hernádfői. The senior SMS is Fanni Meznerics, and the biostatistician is Dániel Sándor Veres.

### MEMBERS OF THE GROUP



**NORBERT KISS**  
Group Leader



**ANDRÁS BÁNVÖLGYI**  
Group Leader



**CSABA LÓDI**  
Group Leader



**FANNI MEZNERICS**  
Scientific Methodology  
Supervisor



**LILI GULYÁS**  
Scientific Methodology  
Supervisor



**KATALIN MARTYIN**  
Scientific Methodology  
Supervisor



**MÁRK HERNÁDFŐI**  
Scientific Methodology  
Supervisor



**DÁNIEL SÁNDOR VERES**  
Statistician

**STUDENTS:** Genevieve Arany-Lao-Kan, Mădălina Andreea Beldie, Dóra Luca Bodócs, Dávid Horváth, Koorosh Karimi, Benna Anna Kelemen, Mária Veronika Kolonics, Dorka Kovács, Máté Krebs, Andrea Lábodi, Gabriella Zita Mohos, Hanna Potra

**SUPERVISORS:** András Bánvölgyi, Péter Holló, Lajos Vince Kemény, Norbert Kiss (Supervisor of the month: **May 2024**), Zoltán Liptai, Csaba Lódi, Kende Lőrincz, János Major, Fanni Meznerics, Katalin Müller (Supervisor of the month: **February 2023**), Iuliana Magdalena Starcea, Miklós Szabó (Supervisor of the month: **July 2023**), Zsuzsanna Varga, Norbert Wikonkál



## GENEVIEVE ARANY-LAO-KAN

MD/PHD STUDENT



### AGE

27 years

### EDUCATION

medical student

### SUPERVISOR(S)

Norbert Kiss, András Bánvölgyi

### E-MAIL

genearany@gmail.com

### TOPIC

Psychodermatological interventions in chronic skin diseases.

### VISION

Decreased psychological burden in patients diagnosed with atopic dermatitis.

### MISSION

Implementing of psychotherapy in the treatment of atopic dermatitis.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy of psychotherapy in the treatment of patients with atopic dermatitis: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the characteristics of psychological interventions in atopic dermatitis: international survey.



## MĂDĂLINA ANDREEA BELDIE

SAINT MARY EMERGENCY CHILDREN HOSPITAL



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Csaba Lódi,  
Iuliana Magdalena Starcea

### E-MAIL

madalina.a.beldie@gmail.com

### TOPIC

IgA Vasculitis with nephritis: challenges and updates in the management of pediatric patients.

### VISION

Decreased chronic kidney disease burden in IgA Vasculitis pediatric patients.

### MISSION

Improving the management of pediatric patients with IgA vasculitis with nephritis.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the predictive accuracy of serum and urinary biomarkers for renal damage in IgA Vasculitis pediatric patients : systematic review and meta-analysis.

#### PROJECT 2:

Investigating the prognostic accuracy of different biomarkers for detection of developmental language disorder in children with neonatal encephalopathy : systematic review and meta-analysis.



## DÓRA LUCA BODÓCS

HEIM PÁL CHILDREN'S HOSPITAL



### AGE

24 years

### EDUCATION

psychologist

### SUPERVISOR(S)

Miklós Szabó, Zsuzsanna Varga

### E-MAIL

bodocsluca10@gmail.com

### TOPIC

Neurocognitive Development of Children with Perinatal Insults.

### VISION

Give every child the chance to speak after perinatal brain injury.

### MISSION

Revealing the early indicators of language difficulties and its connections to perinatal insults.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the prognostic accuracy of different biomarkers for detection of neurocognitive deficits in children with neonatal encephalopathy: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the prognostic accuracy of different biomarkers for detection of developmental language disorder in children with neonatal encephalopathy : Retrospective Cohort Study.



## DÁVID HORVÁTH

BETHESDA CHILDREN'S HOSPITAL



### AGE

35 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

János Major, Katalin Müller

### E-MAIL

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### TOPIC

The Role of Psychological Interventions in Pediatric Inflammatory Bowel Disease.

### VISION

Pediatric IBD patients despite their illness have excellent quality of life.

### MISSION

Identifying every kind of mind-body intervention which improve the health and quality of life of pediatric IBD patients.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of psychological interventions on disease activity and quality of life of pediatric IBD patients: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effect of depression and anxiety on disease activity in newly diagnosed pediatric IBD patients: prospective observational study.



## KOOROSH KARIMI

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

András Bánvölgýi, Kende Lórinicz

### E-MAIL

dr\_kkarimi@yahoo.com

### TOPIC

Novel techniques in the management of hidradenitis suppurativa.

### VISION

Improve the quality of life of Hidradenitis suppurativa patients.

### MISSION

Identifying the best surgical techniques for Hidradenitis Suppurativa.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the use of imaging techniques in the surgical management of hidradenitis suppurativa: systematic review and meta-analysis.

#### PROJECT 2:

Evaluating the current management practices of hidradenitis suppurativa: international survey.



## BELLA ANNA KELEMEN

DEPARTMENT OF DERMATOLOGY, VENEREOROLOGY AND DERMATOONCOLOGY, SEMMELWEIS UNIVERSITY



### AGE

25 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Norbert Kiss, Norbert Wikonkál

### E-MAIL

kelemen.bella.anna@gmail.com

### TOPIC

Advancements in the diagnostics of skin cancer.

### VISION

Early diagnosis and treatment of basal cell carcinoma.

### MISSION

Integrating novel, optical imaging techniques in the diagnosis of basal cell carcinoma.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the accuracy of novel, optical diagnostic imaging techniques for basal cell carcinoma: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the diagnostic accuracy of dermoscopic scoring systems in the detection of malignant melanoma: systematic review and meta-analysis.



## MÁRIA VERONIKA KOLONICS

DEPARTMENT OF DERMATOLOGY, VENERELOGY AND DERMATOONCOLOGY, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Holló, András Bánvölgyi

### E-MAIL

mv.kolonics@gmail.com

### TOPIC

Biologics in the prevention of cardiopulmonary comorbidities in psoriasis.

### VISION

Decreased cardiopulmonary burden in psoriatic patients.

### MISSION

Finding the best therapy for psoriatic patients with cardiopulmonary risk.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effects of biologics on the cardiovascular risk of psoriatic patients: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effect of the microbiome on the therapeutic success in scalp psoriasis: observational clinical study.



## MÁTÉ KREBS

MD/PHD STUDENT



### AGE

25 years

### EDUCATION

medical student

### SUPERVISOR(S)

Lajos Vince Kemény, Péter Holló

### E-MAIL

mate.krebszi@gmail.com

### TOPIC

Investigating the therapeutic approaches in immune-mediated inflammatory skin diseases.

### VISION

Improved quality of life of people with immune-mediated inflammatory skin diseases.

### MISSION

Assessing and addressing the risks associated with JAK inhibitors in immune-mediated inflammatory skin diseases.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the cardiovascular and venous thromboembolic risk with JAK inhibitors in immune-mediated inflammatory skin diseases: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the risk of inflammatory bowel disease in patients treated with IL-17 inhibitors: systematic review and meta-analysis.



## ANDREA LÁBODI

BÁCS KISKUN COUNTY HOSPITAL, KECSKEMÉT



### AGE

32 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Csaba Lódi

### E-MAIL

labodi.andrea@gmail.com

### TOPIC

Optimizing the nutrition of critically ill children by timing and dosing.

### VISION

Adequate nutrition for critically ill children for improved survival.

### MISSION

Investigating the optimal nutritional therapy of critically ill children for better outcomes.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of higher levels of protein intake on mortality and recovery of critically ill children: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the optimal timing of parenteral nutrition on mortality and recovery of critically ill children : randomized controlled trial.



## GABRIELLA ZITA MOHOS

DEPARTMENT OF DERMATOLOGY, VENEREOLOGY AND DERMATOONCOLOGY, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Norbert Kiss, Fanni Meznerics

### E-MAIL

mohos.gabi97@gmail.com

### TOPIC

Microbiome modulation in chronic inflammatory skin diseases.

### VISION

Better care for patients with chronic inflammatory skin diseases.

### MISSION

Implementing microbiome modulation in chronic inflammatory skin diseases.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect and safety of microbiome modulation in atopic dermatitis patients: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the efficacy and safety of topical calcineurin inhibitors in immune-mediated skin diseases: international survey.



## HANNA POTRA

FULL TIME PHD STUDENT



### AGE

25 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Norbert Kiss, Fanni Meznerics

### E-MAIL

potrahanna@yahoo.com

### TOPIC

Innovative therapies of acne: from microbiome modulation to energy-based devices.

### VISION

Improved care of acne patients.

### MISSION

Implementation of novel therapies of acne.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of microbiome modulation in the treatment of acne: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the efficacy and safety of different doses of isotretinoin treatment in acne: international survey.

GROUP 6

**CARDIOLOGY,  
SPORT & SPACE  
SCIENCE**





# GROUP 6

## CARDIOLOGY, SPORT & SPACE SCIENCE

### INTRODUCTION TO THE GROUP

The Cardiology, Sport and Space Science group is engaged in a wide range of medical disciplines, including cardiology, clinical pharmacology, orthopedics and traumatology, interventional radiology, space science, neurosurgery, psychiatry, and physiotherapy. Their research topics span the investigation of various pacing modalities in bradycardia, the effects of physical training on post-fracture outcomes, the study of cardiovascular risk factors in immigrants, the comparison of minimally invasive methods for treating drug-resistant epilepsy, and even the impact of space environments on the skin. The group is led by Péter Ferdinandy, Vice-Rector for Science and Innovations at Semmelweis University, and Gábor Duray, Head of the Cardiology Department at the Central Hospital of Northern Pest. The team comprises a number of interdisciplinary supervisors and experts.

There are 15 PhD students, including three MD-PhD candidates, supported by statistician Tamas Kói and three methodology supervisors: Nina Galdzytska, and Amir Makolli as Junior SMSs, and Scientific Methodology Expert Marie Anne Engh.

### MEMBERS OF THE GROUP




04/24

**PÉTER FERDINANDY**  
*Group Leader*




01/24

**GÁBOR DURAY**  
*Group Leader*




12/21

**MARIE ANNE ENGH**  
*Scientific Methodology Supervisor*




07/23  
11/23

**NINA GALDZYTSKA**  
*Scientific Methodology Supervisor*




02/24

**AMIR MAKOLLI**  
*Scientific Methodology Supervisor*




12/22  
08/23

**TAMÁS KÓI**  
*Statistician*

**STUDENTS:** Alexandra Ádám, Shahar Adar, Tudor-Cristian Cozma, Tamás Péter Füzési, Krisztina Kornis, Bernadett Miriam László-Dobai, Judit Sára Liebermann, Nándor József Nemes, Tamás Óvári, András Zoltán Posta, Aliyeva Sevda, Dániel Szmola, Bertalan Tordai, Arashk Árpád Zabihi

**SUPERVISORS:** Zoltán Bejek, András Bibok, István Domán, Dan Dobrenau, Gábor Duray (Supervisor of the month: **January 2024**), Péter Ferdinandy (Supervisor of the month: **April 2024**), Anikó Görbe, András Horváth (Supervisor of the month: **August 2023**), Dénes Balázs Horváthy (Supervisor of the month: **February 2024**), Béla Merkely, Alotti Nasri, Noémi Nyolczas, Renáta Papp, Nóra Sydó, Dániel Sándor Veres (Statistician of the month: **March 2023**), Ákos Zahár



## SHAHAR ADAR

MD/PHD STUDENT



### AGE

28 years

### EDUCATION

medical student

### SUPERVISOR(S)

Dénes Balázs Horváthy

### E-MAIL

shaharadar2011@gmail.com

### TOPIC

The Role of Alternative Treatment Methods in Lung Cancer.

### VISION

Increased quality of life and the survival rate of patient with lung cancer.

### MISSION

Conducting comprehensive analysis of different treatment strategies for lung cancer.

### SPECIFIC GOALS

#### PROJECT 1:

Evaluating the Efficacy and Safety of Radiotherapy, Surgical resection and Lung ablation in the Treatment of Patients with Early-Stage Non-Small Cell Lung Cancer (NSCLC): Systematic Review and Meta-analysis.

#### PROJECT 2:

Evaluating the Safety and Efficacy of Lung Cryoablation and Surgery For The Treatment of Early-Stage NSCLC: Randomized Controlled Trial.



## SEVDA ALIYEVA

MD/PHD STUDENT



### AGE

23 years

### EDUCATION

medical student

### SUPERVISOR(S)

Péter Ferdinandy, Anikó Görbe

### E-MAIL

aliyevasevda@outlook.com

### TOPIC

New insights into the Cardiometabolic Health and Safety of selected Drug classes.

### VISION

Enhanced Cardioprotective strategies.

### MISSION

Investigating how existing treatments can be further optimized to improve cardiometabolic health.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of MAO-A and MAO-B Inhibition on Cardiovascular and Metabolic outcomes in Animal models: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the Effect of MAO-A and MAO-B Inhibition on Metabolic Outcomes in Animal Models: A Systematic Review and Meta-analysis.



## ALEXANDRA ÁDÁM

MD/PHD STUDENT



### AGE

25 years

### EDUCATION

medical student

### SUPERVISOR(S)

Dénes Balázs Horváthy, András Bibok

### E-MAIL

adam.alexandra@stud.semmelweis.hu

### TOPIC

The role of radiation lobectomy as a bridge to surgery treatment in patients with liver tumors.

### VISION

Patients with liver tumor having less invasive way of treatment.

### MISSION

Improving the role and impact of interventional radiology in oncological therapy.

### SPECIFIC GOALS

#### PROJECT 1:

Investigation of the effect of radiation lobectomy in patients with liver tumors: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the safety and efficacy of radioembolization in patients with hepatocellular carcinoma: Retrospective cohort study



## TUDOR-CRISTIAN COZMA

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

25 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Ferdinandy, Renáta Papp

### E-MAIL

cozmatudor19@gmail.com

### TOPIC

New insights upon adverse events of Statin treatment.

### VISION

Prolonged, healthy and independent lives for the elderly.

### MISSION

Providing evidence regarding the role of antihypertensive medication on the musculoskeletal system in the elderly population.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Effect of Antihypertensive Medication on Musculo-skeletal System in Adult Patients: Systematic Review and Meta-analysis.

#### PROJECT 2:

Assessment of the efficacy and safety of monoclonal antibodies in patients with acute myocardial infarction for improvement of inflammatory profile: registry analysis.



## KRISZTINA KORNIS

SELF-EMPLOYED, LECTURER AT SEMMELWEIS UNIVERSITY



### AGE

33 years

### EDUCATION

psychotherapist

### SUPERVISOR(S)

Nóra Sydó, Gergő Merkely

### E-MAIL

kornis.kriszti@gmail.com

### TOPIC

Key Differences in Sex-Specific Outcomes After Anterior Cruciate Ligament Reconstruction.

### VISION

Revolutionize physical therapy assessment & treatment with innovative methods.

### MISSION

Exploring innovative strategies in physical therapy by conducting research.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the sex differences in clinical outcomes after anterior cruciate ligament reconstruction: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effect of sex on the prevalence of arthrofibrosis after anterior cruciate ligament reconstruction surgery: systematic review and meta-analysis



1 YEAR  
MSC  
PROGRAM

## BERNADETT MIRIAM LÁSZLÓ-DOBAI

TIRGU MURES EMERGENCY CLINICAL COUNTY HOSPITAL



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Gábor Duray, Dan Dobrenau

### E-MAIL

dobai.bernadettmiriam@gmail.com

### TOPIC

Management of cardiac implantable electronic devices among patients with bradycardia.

### VISION

World with less Heart Failure.

### MISSION

Reducing Heart Failure incidence through pacing modalities.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the safety and effectiveness of pacing modalities in patients with bradycardia: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the incidence of atrial fibrillation after flutter ablation: systematic review and meta-analysis.



## JUDIT SÁRA LIEBERMANN

FULL TIME PHD STUDENT



**AGE**

30 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Gábor Duray

**E-MAIL**

liebermannjudit@gmail.com

**TOPIC**

Strategies in coronary artery bypass grafting in patients with acute myocardial infarction.

**VISION**

Highest standard of care for patients with Acute Coronary Syndrome.

**MISSION**

Comparing outcomes across different timing strategies.

**SPECIFIC GOALS**

**PROJECT 1:**

Investigating the optimal timing of coronary artery bypass grafting in patients with acute myocardial infarction: systematic review and meta-analysis.

**PROJECT 2:**

Investigating the effect of BMI on the postoperative complication in patients undergo the open heart surgery: systematic review and meta-analysis.



## NÁNDOR JÓZSEF NEMES

FEJÉR COUNTY SZENT GYÖRGY UNIVERSITY TEACHING HOSPITAL



**AGE**

31 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Ákos Zahár, István Domán

**E-MAIL**

nandor.j.nemes@gmail.com

**TOPIC**

Contemporary alignment techniques in total knee arthroplasty.

**VISION**

Pain-free active life for people with end-stage osteoarthritis.

**MISSION**

Finding the best technique for total knee replacement.

**SPECIFIC GOALS**

**PROJECT 1:**

Comparing the safety and effectiveness of kinematic and mechanical alignment in total knee arthroplasty: systematic review and meta-analysis.

**PROJECT 2:**

Comparing the safety and effectiveness of inverse kinematic alignment and mechanical alignment in total knee arthroplasty: randomized controlled trial.



## TAMÁS ÓVÁRI

DEPARTMENT OF PSYCHIATRY, MARKUSOVSZKY TEACHING HOSPITAL, SZOMBATHELY



**AGE**

33 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Alotti Nasri, Gábor Duray

**E-MAIL**

ovatam@icloud.com

**TOPIC**

Heart rate variability in anxiety disorders.

**VISION**

A world where every individual has the tool to diagnose anxiety disorder.

**MISSION**

Integrating HRV analysis into clinical practice for personalized, effective management of anxiety disorders.

**SPECIFIC GOALS**

**PROJECT 1:**

Investigating the correlation between heart rate variability and severity of the anxiety: systematic review and meta-analysis.

**PROJECT 2:**

Comparing different therapeutic approaches in patient with anxiety disorder: systematic review and meta-analysis.



## ANDRÁS ZOLTÁN POSTA

DEPARTMENT OF ORTHOPAEDICS, SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zoltán Bejek

### E-MAIL

posta.andras13@gmail.com

### TOPIC

Residual Symptoms at Total Knee Arthroplasty Surgery.

### VISION

Operating people with Knee Osteoarthritis the best possible way.

### MISSION

Studying the different techniques of Total Knee Arthroplasty.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of Esmarch Tourniquet during Total Knee Arthroplasty Surgery: systematic review and meta-analysis.

#### PROJECT 2:

Assessing the effect of preoperative biomarkers on postoperative outcomes in patients undergoing Total Knee Replacement: longitudinal cohort study.



## DÁNIEL SZMOLA

DEPARTMENT OF ORTHOPAEDICS, SEMMELWEIS UNIVERSITY



### AGE

33 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Ferdinandy, Zoltán Bejek

### E-MAIL

szmolaadaniel@gmail.com

### TOPIC

Novel Approaches in Optimizing Bone Health.

### VISION

Healthcare with optimal training protocols for bone health.

### MISSION

Discovering the best training protocols for robust bone health.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Safety and Efficacy of Physical Training in Post-Fractures Patients: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the Safety and Efficacy of Nutritional supplementation in Post-Fractures Patients: Systematic Review and Meta-analysis.



## BERTALAN TORDAI

BUDA HEALTH CENTER



### AGE

42 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Dániel Sándor Veres, Renáta Papp

### E-MAIL

dr.tordai.bertalan@gmail.com

### TOPIC

The effect of migration on healthcare.

### VISION

Help the migrants and immigrants to find their good place.

### MISSION

Identifying the most effective interventions to improve health status of immigrants.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the cardiovascular risks of immigrants in comparison with the domestic population: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the prevalence of the cardiovascular risk factors among immigrants in the EU (Eurostat Analysis)



## ARASHK ÁRPÁD ZABIHI

HUNGARIAN DEFENSE FORCES MEDICAL CENTRE

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### AGE

30 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

András Horváth

### E-MAIL

zabihi\_arashk@outlook.com

### TOPIC

Novel insights into the neurosurgical interventions for patients with drug-resistant epilepsy.

### VISION

Improved epileptic patients' quality of life.

### MISSION

Investigating novel minimally invasive neurosurgical interventions to provide better therapeutic outcome.

### SPECIFIC GOALS

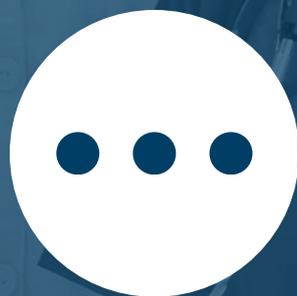
#### PROJECT 1:

Investigating the safety and efficacy of minimally invasive neurosurgical interventions in patients with periventricular nodular heterotopia related drug-resistant epilepsy: systematic review and meta-analysis.

#### PROJECT 2:

Investigating minimally invasive surgical outcomes in patients with mesial temporal lobe epilepsy: systematic review and meta-analysis.

GROUP 7  
**MISCELLANEOUS**





# GROUP 7

## MISCELLANEOUS

### INTRODUCTION TO THE GROUP

The Miscellaneous group, led by Emese Sipter, an esteemed Internist from Semmelweis University specializing in Diabetology, Lipidology, and Obesity, and Gergely Agócs as a notable biostatistician from the Department of Biophysics and Radiation Biology, Semmelweis University; is dedicated to addressing a diverse array of pressing health issues through high-quality research. Their projects span a broad range of topics, including investigating the effects of insulin therapy in cystic fibrosis patients, the role of inflammatory mediators in diabetes progression among prediabetic adults, and identifying the risk factors contributing to atherosclerosis in obese populations. Additionally, they are exploring predictive factors for papillary thyroid microcarcinoma, enhancing the diagnostic accuracy of dysglycemia with continuous glucose monitoring (CGM), and assessing the impact of micro and nanoplastics on health. Their research also focuses on evaluating the safety and effectiveness of therapies aimed at preventing corneal haze following refractive surgeries.

Comprising a multidisciplinary team of seven PhD students, helped by Gábor Kovács, endocrinology expert from ÉPC-HK, Zoltán Zsolt Nagy and Ágnes Takács from the Department of Ophthalmology, Semmelweis University along with two junior scientific methodology supervisors (SMS) Isabel Amorim and Jimin Lee, a senior SMS Anett Rancz, they are committed to advancing medical science across these diverse fields. Their ultimate goal is to contribute to better patient care and global health through rigorous, collaborative research.

### MEMBERS OF THE GROUP



06/22



**GERGELY AGÓCS**  
*Group Leader*



04/23



**EMESE SIPTER**  
*Group Leader*



06/23  
01/24



**ANETT RANCZ**  
*Scientific Methodology Supervisor*



02/24



**ISABEL AMORIM**  
*Scientific Methodology Supervisor*



**JIMIN LEE**  
*Scientific Methodology Supervisor*



**BOGLÁRKA SZENTES**  
*Statistician*

**STUDENTS:** Anca Cristina Dolhascu, Miaoxin (Macy) Huang, Judit Nagy, Máté Orgoványi, Gabriella Rákóczi, Nicolaus Istvan Sándor, Szilárd Lajos Szalczer

**SUPERVISORS:** Gergely Agócs, Péter Hegyi, Gábor Kovács, Zoltán Zsolt Nagy, Emese Sipter, Ágnes Takács



## ANCA CRISTINA DOLHASCU

INSTITUTE OF PNEUMOPHYSIOLOGY "MARIUS NASTA" BUCHAREST



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Hegyi, Emese Sipter

### E-MAIL

anca.dolhascu95@gmail.com

### TOPIC

New Horizons in the Treatment and Prevention of CFRD.

### VISION

All CF patients' glucose metabolism is set to the best level that we can achieve.

### MISSION

Finding the best therapeutic method which stabilizes glucose metabolism and also improves lung function.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Effect of Insulin Therapy in Cystic Fibrosis Patients: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the Effect of Triple Transmembrane Regulator Therapy on Glucose Metabolism in CF Patients: Systematic Review and Meta-analysis.



## MIAOXIN (MACY) HUANG

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Hegyi, Emese Sipter

### E-MAIL

tianhao0411@gmail.com

### TOPIC

The Role Of Inflammation In Progression Of Abnormal Glucose Tolerance.

### VISION

Global access to education and resources to prevent prediabetes from progressing to type 2 diabetes.

### MISSION

Determining which factors affect the progression of prediabetes into diabetes.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Effect of Inflammatory Mediators on the Development of Diabetes in Adults with Prediabetes: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the Effect of Inflammatory Mediator Levels on Disease Progression and Comorbidities in Patients with Metabolic-Associated Steatotic Liver Disease (MASLD): Systematic Review and Meta-Analysis.



## JUDIT NAGY

NOVO NORDISK



### AGE

49 years

### EDUCATION

pharmacist

### SUPERVISOR(S)

Péter Hegyi

### E-MAIL

judit1386@gmail.com

### TOPIC

Risk factors of atherosclerosis in obese patients.

### VISION

Better detection of subclinical atherosclerosis of obese individuals.

### MISSION

Through comprehensive research to improve clinical practice, guide preventive strategies, influence policy for better management of CV risk associated with obesity.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the lipid profile of obesity phenotypes in atherosclerosis prediction: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the inflammation profile of obesity phenotypes in atherosclerosis prediction: systematic review and meta-analysis.



## MÁTÉ ORGOVÁNYI

UZSOKI TEACHING HOSPITAL



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Gábor Kovács

### E-MAIL

org.mate21@gmail.com

### TOPIC

Management of low-risk papillary thyroid cancer.

### VISION

Better management of low-risk papillary thyroid cancer.

### MISSION

Providing evidence-based knowledge for the risk factors of papillary thyroid microcarcinoma.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the predicting accuracy of different risk factors of papillary thyroid microcarcinoma: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the radioactive iodine treatment as a risk factor for second primary malignancies in differentiated thyroid cancer patients: systematic review and meta-analysis.



## GABRIELLA RÁKÓCZI

SELF-EMPLOYED, UPLEVEL



### AGE

50 years

### EDUCATION

dietitian

### SUPERVISOR(S)

Péter Hegyi, Emese Sipter

### E-MAIL

rakoczigabi277@gmail.com

### TOPIC

Continuous Glucose Monitoring and Diabetes.

### VISION

Decreased incidence of diabetes mellitus.

### MISSION

Identifying and correct dysglycemia before it develops into diabetes.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Diagnostic Accuracy of CGM on Dysglycemia: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the Effect of Non-Pharmacological Interventions on the Reversal of Type 2 Diabetes: Systematic Review and Meta-analysis.



## ISTVÁN NICOLAUS SÁNDOR

THE CENTRAL BANK OF HUNGARY



### AGE

26 years

### EDUCATION

central banker/analyst

### SUPERVISOR(S)

Gergely Agócs

### E-MAIL

nicolaussandor@gmail.com

### TOPIC

Investigating the Effect of Micro- and Nanoplastics on Health.

### VISION

A World where environmental factors are not deteriorating human health.

### MISSION

Providing the necessary high-quality evidence to policymakers to improve the quality of life

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Effects of Micro and Nanoplastics on Health in Animals: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the Effects of Micro and Nanoplastics on Health in Humans: Systematic Review and Meta-analysis.

**AGE**

26 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Zoltán Zsolt Nagy, Ágnes Takács

**E-MAIL**

szalczer.szilard@gmail.com

## SZILÁRD LAJOS SZALCZER

DEPARTMENT OF OPHTHALMOLOGY, SEMMELWEIS UNIVERSITY

**TOPIC**

Corneal Healing after Refractive Surgery.

**VISION**

Refractive surgeries without complications.

**MISSION**

Finding a topical-used medication to prevent corneal haze.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the Safety and Effectiveness of Different Therapies in the Prevention of Corneal Haze after Refractive Surgeries: Systematic Review and Meta-analysis.

**PROJECT 2:**

Investigating the Diagnostic Accuracy of Subjective and Objective Measurements of Corneal Haze: Systematic Review and Meta-analysis.



# YEAR II.

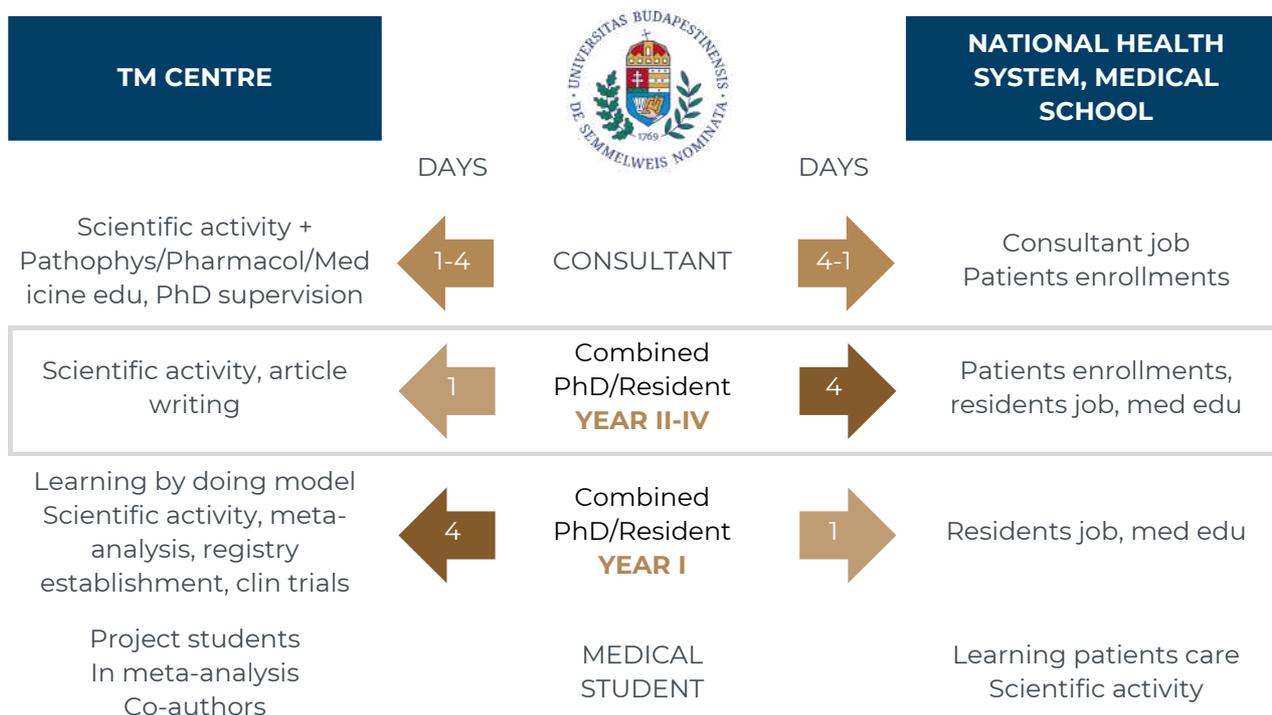
STARTED IN  
SEPTEMBER 2023

# 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	Every second week, 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 bi-weekly group meetings. Attendance is mandatory for Accelerator and Excellent students. Individual students are encouraged to participate in the group meetings to follow the group's progress. This year, the ESFs and ESDs, who are highly experienced scientific methodology consultants, will lead group meetings.

The group meetings will aim to present the progress during the last two weeks and a plan for the next meeting. 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 1-2/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 5th Progress Report
- everyone is expected to complete the statistical analysis of their second project until the 5th Progress Report
- everyone is expected to present the achievements at the progress report
- the second article must be finished by the 6th 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.

## LEARNING MANAGEMENT SYSTEMS

We are continuously developing our Moodle platform. Students and supervisors should regularly check the platform and follow the announcements. We are also increasing the use of cloud systems. Semmelweis University is continuously introducing the use of Microsoft products that we fully support.

For communication, we 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](http://elearning.tm-centre.org/edu)

### **PROGRESS REPORT V**

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 2024/2025 academic year.

Dates: **January 21-23, 2025**

### **PROGRESS REPORT VI - COMPLEX EXAM**

Between **June 17-21, 2025**, 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 module 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 social 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.

GROUP 1  
**CARDIOLOGY &  
INTENSIVE**





# GROUP 1 CARDIOLOGY & INTENSIVE



## INTRODUCTION TO THE GROUP

The cardio-intensive group is named as such after the two senior supervisors, Gábor Duray and Zsolt Molnár, a cardiologist and intensivist, respectively, who are highly renowned researchers and long-time collaborators with the Centre for Translational Medicine. They lead the group of twelve highly motivated students with outstanding leadership and experience. Furthermore, the group boasts twelve more supervisors, including two junior supervisors who are current PhD students in their second and third years with our centre. Caner Turan is the group's scientific methodology supervisor. Despite the group name, a wide range of clinical fields are represented in this multidisciplinary team, supporting productive discussions on various projects that include cardiology, intensive care, anesthesiology, pulmonology, rheumatology, and interventional radiology. This group's students are working on systematic review projects and protocols of various important clinical experiments.

## MEMBERS OF THE GROUP



**ZSOLT MOLNÁR**  
*Group Leader*



**GÁBOR DURAY**  
*Group Leader*



**CANER TURAN**  
*Scientific Methodology Supervisor*



**BENCE SZABÓ**  
*Statistician*



**MIKOLT BAKONY**  
*Statistician*

**STUDENTS:** Brúnó Bánk Balázs, Anna Boglárka Bardóczy, Nina Galdzytska, Dávid Laczkó, Adolf Lichtfusz, Zsombor Zoltán Matics, Tímea Mátyási Dombi, Levente Prácsr, Mátyás Rédei, Petra Sólmos, Idikó Szántó, Eszter Szőke

**SUPERVISORS:** Gábor Duray, István Ferenc Édes, Gábor Horváth, Dénes Balázs Horváthy (Supervisor of the month: **February 2024**), Emőke Henrietta Kovács, András Lovas, Zsolt Molnár, Veronika Müller, Balázs Nemes, Judit Papp, Márton Papp, Zoltán Ruszkai, Krisztián Tánzos, László Zubek

**AGE**

25 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

István Ferenc Édes

**E-MAIL**

balazsbrunob@gmail.com

## BRÚNÓ BÁNK BALÁZS

HEART AND VASCULAR CENTER, SEMMELWEIS UNIVERSITY

**TOPIC**

Novel methods to optimize cardiac catheterization.

**VISION**

Enhance the safety of the cardiac catheterization laboratory team by reducing occupational hazards.

**MISSION**

Provide forward-looking and novel scientific results in occupational radiation safety.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the risk of radiation exposure for different personnel during fluoroscopy-guided cardiovascular procedures: a systematic review and meta-analysis.

**PROJECT 2:**

Evaluating Various Types of Radioprotective Equipment in the Catheterization Laboratory (EVERET): A Phantom Study.



03/24

**AGE**

28 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Gábor Horváth

**E-MAIL**

bardoczi.anna@gmail.com

## ANNA BOGLÁRKA BARDÓCZI

DEPARTMENT OF PULMONOLOGY, SEMMELWEIS UNIVERSITY

**TOPIC**

Potential effects of GLP-1 analogs in obstructive sleep apnea patients.

**VISION**

Provide a better quality of life for people with obstructive sleep apnea by developing novel treatment strategies.

**MISSION**

Investigate whether the weight loss drugs GLP-1 analogs could help to reduce/eliminate obstructive sleep apnea symptoms.

**SPECIFIC GOALS****PROJECT 1:**

Potential effects of GLP-1 analogs in obstructive sleep apnea patients: a systematic review and meta-analysis.

**PROJECT 2:**

Comparing the effectiveness and safety of positive airway pressure therapies in Pickwickian syndrome: a systematic review and meta-analysis

**AGE**

34 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Gábor Duray

**E-MAIL**

n.galdzytska@gmail.com

## NINA GALDZYTSKA

HUNGARIAN DEFENSE FORCES MEDICAL CENTRE

**TOPIC**

The role of chronic systemic inflammation in cardiovascular pathology.

**VISION**

Improve approaches to the diagnosis and treatment of patients with chronic systemic inflammation.

**MISSION**

Study inflammatory cytokines and their role in patients with chronic inflammation.

**SPECIFIC GOALS****PROJECT 1:**

Improve the treatment, diagnosis and risk assessment of patients with chronic inflammation: a systematic review and meta-analysis.

**PROJECT 2:**

Investigating the role of inflammatory biomarkers in the development of in-stent restenosis in patients who underwent percutaneous coronary intervention: a systematic review and meta-analysis.



## DÁVID LACZKÓ

DEPARTMENT OF INTERVENTIONAL RADIOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Balázs Nemes

### E-MAIL

laczkodavid97@hotmail.com

### TOPIC

Investigating the efficiency of arterial and venous endovascular procedures.

### VISION

Improve the mortality and quality of life of patients with cardiovascular diseases.

### MISSION

Identify the best available procedures to achieve my vision.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effectiveness and safety of embolic agents in bronchial artery embolisation: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating particle embolic agents in bronchial artery embolisation: a retrospective cohort study.



## ADOLF LICHTFUSZ

HUNGARIAN DEFENSE FORCES MEDICAL CENTRE



### AGE

26 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Gábor Duray, Judit Papp

### E-MAIL

adolf.lichtfusz@gmail.com

### TOPIC

Management strategies for patients with heart failure.

### VISION

Heart failure patients with an individualised treatment strategy.

### MISSION

Clarify the best treatment plan for each subgroup of patients.

### SPECIFIC GOALS

#### PROJECT 1:

Assessing the effectiveness of transcatheter mitral valve repair on left ventricular reverse remodeling in heart failure: a systematic review and meta-analysis.

#### PROJECT 2:

Epiaortic Ultrasound in Cardiac Surgery: Reducing Perioperative Stroke Risk Through Improved Aortic Assessment



## ZSOMBOR ZOLTÁN MATICS

DEPARTMENT OF PULMONOLOGY, SEMMELWEIS UNIVERSITY



### AGE

32 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Veronika Müller

### E-MAIL

maticszsombor@gmail.com

### TOPIC

Infections in fibrosing interstitial lung diseases.

### VISION

Infectology will be an inseparable part of the evaluation of interstitial lung diseases.

### MISSION

Provide evidence-based data that draws attention to the importance of infectology.

### SPECIFIC GOALS

#### PROJECT 1:

Prevalence of respiratory tract infections in antifibrotic-treated idiopathic pulmonary fibrosis: a systematic review and meta-analysis.

#### PROJECT 2:

Antibiotic Effectiveness and Co-Infection Patterns of Streptococcus pneumoniae in COPD Patients Requiring High Dependency Unit Care: A Retrospective Analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Matics, ZsZ. et al. (2024) Treatable traits in idiopathic pulmonary fibrosis: focus on respiratory tract infections-a systematic review and a meta-analysis. *EClinicalMedicine*, Q1, IF: 9.600



## TÍMEA MÁTYÁSI-DOMBI

BUDAPEST DR. MANNINGER JENŐ TRAUMA CENTRE,  
ANESTHESIA AND INTENSIVE CARE DEPARTMENT



### AGE

40 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zsolt Molnár, Krisztián Tánczos,  
Emőke Henrietta Kovács

### E-MAIL

dombitimi@gmail.com

### TOPIC

Management of low-risk papillary thyroid cancer.

### VISION

Better management of low-risk papillary thyroid cancer.

### MISSION

Providing evidence-based knowledge for the risk factors of papillary thyroid microcarcinoma.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the effectiveness and safety profiles of different anticoagulant therapies in sepsis-associated coagulopathy: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the efficacy and safety of early fibrinogen supplementation in patients with severe trauma: a systematic review and meta-analysis



## LEVENTE PRÁCSE

SZENT JÁNOS HOSPITAL



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zsolt Molnár, Márton Papp,  
László Zubek

### E-MAIL

pracserlevente@gmail.com

### TOPIC

Investigating the consequences of inappropriate antibiotic use in the Intensive Care Unit.

### VISION

I want to live in a world where every physician can access the most up-to-date resources.

### MISSION

Provide the best clinical evidence possible to help healthcare professionals make the best possible decisions.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effects of inappropriate antibiotic use on complication rate in the Intensive Care Unit: a systematic review and meta-analysis.

#### PROJECT 2:

Procalcitonin kinetics-guided antibiotic management in patients with septic shock: protocol of a randomized controlled trial



## MÁTYÁS RÉDEI

MEDICAL IMAGING CENTRE, SEMMELWEIS UNIVERSITY



### AGE

26 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Dénes Balázs Horváthy

### E-MAIL

mredei54@gmail.com

### TOPIC

Impact of Navigational Systems on CT-guided Interventions.

### VISION

Enhance CT-guided interventions with advanced navigational systems for safer and more effective patient outcomes.

### MISSION

To thoroughly research navigational systems' impact on CT-guided interventions, assessing safety and effectiveness comprehensively.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Safety and Effectiveness of Navigational Systems for Patients Undergoing CT-Guided Intervention: a systematic review and meta-analysis.

#### PROJECT 2:

Comparing complication rates: PEARL protocol vs standard method in CT-guided pulmonary biopsies



## PETRA SÓLYMOS

MEDICAL IMAGING CENTRE, SEMMELWEIS UNIVERSITY



### AGE

26 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Dénes Balázs Horváthy

### E-MAIL

petrasolymos@gmail.com

### TOPIC

Investigating radioembolization as an option in the treatment of liver tumors.

### VISION

Prolong the life of patients with liver tumors using radioembolization as treatment.

### MISSION

Determine the efficacy and safety of the isotopes in clinical use.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the safety and efficacy of <sup>166</sup>Ho radioembolization in patients with liver tumor: a systematic review and meta-analysis.

#### PROJECT 2:

Establishment of the transarterial radioembolization registry for the treatment of liver tumors: initiation of a registry



## ILDIKÓ SZÁNTÓ

JÓSA ANDRÁS HOSPITAL, DEPARTMENT OF ANESTHESIOLOGY AND INTENSIVE THERAPY



### AGE

43 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zsolt Molnár, Zoltán Ruszkai

### E-MAIL

szantoildiko09@gmail.com

### TOPIC

The association between fluid therapy and organ dysfunction in critically ill patients.

### VISION

Improve postoperative outcomes in high-risk surgical patients.

### MISSION

To identify the best possible therapy strategy that causes the least harm in critically ill patients.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Effects of balanced crystalloids vs. normal saline on organ dysfunction in patients undergoing major abdominal surgery: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effects of balanced crystalloids versus isotonic saline on organ dysfunction in septic shock: a systematic review and meta-analysis



## ESZTER SZÓKE

SEMMELWEIS HOSPITAL, KISKUNHALAS



### AGE

33 years

### EDUCATION

speech and language therapist

### SUPERVISOR(S)

Zsolt Molnár, András Lovas

### E-MAIL

szokeeszter05@gmail.com

### TOPIC

Diagnosing and preventing dysphagia associated complications in tracheostomized critically ill patients.

### VISION

Speech therapists and physicians working side-by-side for our patients.

### MISSION

Improve tracheostomized patients' lives by reducing aspiration-related complications.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the Modified Evan's Blue Dye Test (MEBDT) to Fiberoptic Endoscopic Evaluation of Swallowing (FEES) in diagnosing aspiration in tracheostomized critically ill patients: a systematic review and meta-analysis.

#### PROJECT 2:

The practice of the modified Evan's blue dye test to assess dysphagia in intensive care units around the world: an international survey

GROUP 2  
**DENTISTRY**





# GROUP 2 DENTISTRY



## INTRODUCTION TO THE GROUP

The dentistry group consists of 18 students and 27 supervisors who work in various fields of medicine. The group includes disciplines such as prosthodontics, community dentistry, oral and maxillofacial surgery, orthodontics, implantology, and endodontics. As all the dental fields are represented in the group, a multidisciplinary approach to the discussion of clinical topics presents a unique opportunity for both the PhD students and their supervisors. All students are conducting systematic reviews and meta-analyses to improve clinical practice and to have a positive effect on their patients' lives. Furthermore, several clinical trials and observational studies are conducted to provide high-quality evidence in the respective fields. The SMSs of the team are Bianca Golzio, Xinyi Qian, Alexander Schulze Wenning, and Eszter Szalai, who are coordinating a huge variety of topics. Group leaders are Beáta Kerémi, Dániel Végh, and Gábor Varga, who are acknowledged experts in their field at Semmelweis University.

## MEMBERS OF THE GROUP

	  <p><b>GÁBOR VARGA</b> <i>Group Leader</i></p>	  <p><b>BEÁTA KERÉMI</b> <i>Group Leader</i></p>		
 <p>10/21</p>	 <p><b>BIANCA GOLZIO</b> <i>Scientific Methodology Supervisor</i></p>	 <p>10/22 09/23</p>  <p><b>XINYI QIAN</b> <i>Scientific Methodology Supervisor</i></p>	 <p>01/23 10/23</p>  <p><b>ALEXANDER S. WENNING</b> <i>Scientific Methodology Supervisor</i></p>	 <p>06/23</p>  <p><b>ESZTER ÁGNES SZALAI</b> <i>Scientific Methodology Supervisor</i></p>
 <p>12/22</p>		 <p>04/23</p>  <p><b>GERGELY AGÓCS</b> <i>Statistician</i></p>	 <p>07/23 03/24</p>  <p><b>SZILVIA KISS-DALA</b> <i>Statistician</i></p>	

**STUDENTS:** Yasir Nabeel Abdulrazzaq Al-Mohammad, Melinda Antal, Ádám Fekete, Bruna Guimaraes, Ellay Gutmacher, Kata Sára Haba, Dániel Horváth, Caroline Kelly, Patrik Kreuter, Péter Márton, Éva Mlinkó, Adél Eszter Mózes, Lilien Nagy, Elias-Leon Nolden, Flóra Helga Olasz, Petra Papócsi, Adrienn Pál, Bálint Zsombor Sári, Éva Zsófia Vincze

**SUPERVISORS:** Emese Ábrám, Nándor Ács (Supervisor of the month: **September 2021**, **May 2024**), Dorottya Bányai, Andrea Bródy, Zoltán Gécz, Dóra Haluszka, Beáta Kerémi (Supervisor of the month: **January 2023**), Márton Kivovics (Supervisor of the month: **December 2023**), László Köles, Krisztina Márton, Orsolya Németh (Supervisor of the month: **March 2023**), Zsolt Németh, Zsolt Lohinai, Ivett Róth, Noémi Katinka Rózsa, Gábor Varga, Mihály Vaszilkó, János Vág, Dániel Végh, Ákos Zsembery



## YASIR N. A. AL-MOHAMMAD

DEPARTMENT OF PROSTHODONTICS, UNIVERSITY OF BASRAH



### AGE

33 years

### EDUCATION

dentist

### SUPERVISOR(S)

Gábor Varga

### E-MAIL

yasir.abdulrazzaq@uobasrah.edu.iq

### TOPIC

New insights in the management of partially or completely edentulous patients.

### VISION

Providing the patient with a durable, long term and comfortable prosthesis.

### MISSION

Investigating the clinical evidence concerning implants and abutments in fixed prosthodontics.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the long-term success of zirconia versus titanium implant abutments: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the efficacy and safety of added soft liners on removable denture: a systematic review and meta-analysis.



## MELINDA ANTAL

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

24 years

### EDUCATION

dentistry student

### SUPERVISOR(S)

Emese Ábrám

### E-MAIL

lindiant8@gmail.com

### TOPIC

Optical and mechanical characteristics of dental ceramics.

### VISION

Provide patients the best all-ceramic restoration.

### MISSION

Supply dentists a guidance about the appliance of different dental ceramics.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the mechanical characteristics of additively vs subtractively manufactured dental ceramics: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effect of aging on the color stability of dental ceramics: a systematic review and meta-analysis.



## ÁDÁM FEKETE

DEPARTMENT OF RESTORATIVE DENTISTRY AND ENDODONTICS, SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

dentist

### SUPERVISOR(S)

János Vág, Beáta Kerémi

### E-MAIL

adam.fekete1996@gmail.com

### TOPIC

Imbalance in vascular reactivity between healthy women and men.

### VISION

Improving the quality-adjusted life-year (QALY) of female patients with cardiovascular and periodontal diseases.

### MISSION

Provide evidence based data for personalized care.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing vascular reactivity between healthy women and men on macrovascular and microvascular level: a systematic review and meta-analysis.

#### PROJECT 2:

Comparing post-occlusive reactive hyperemia of the finger pulp between healthy and periodontitis patients: A non-randomized controlled trial



## BRUNA GUIMARAES

DEPARTMENT OF COMMUNITY DENTISTRY, SEMMELWEIS UNIVERSITY



### AGE

36 years

### EDUCATION

dentist

### SUPERVISOR(S)

Márton Kivovics

### E-MAIL

brunaguimaraess@icloud.com

### TOPIC

Investigating the accuracy of artificial intelligence used for caries diagnosis.

### VISION

Making high end dental solutions accessible to the public.

### MISSION

Applying artificial intelligence not only for implant dentistry, but community dentistry as well.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Guimares, B. et al. (2024) Diagnostic Accuracy of Artificial Intelligence for Approximal Caries on Bitewing Radiographs: A Systematic Review and Meta-analysis. *J Dent*, Q1, IF: 4.400

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the accuracy of artificial intelligence used for approximal caries diagnosis: A Systematic Review and Meta-Analysis.

#### PROJECT 2:

Investigating the accuracy of intraoral scanner at diagnosing caries: a systematic review and meta-analysis.



## ELLAY GUTMACHER

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

26 years

### EDUCATION

dentistry students

### SUPERVISOR(S)

Ákos Zsembery, Andrea Bródy

### E-MAIL

ellaygutmacher@gmail.com

### TOPIC

Novel insights into the oral - systemic health axis.

### VISION

Empowering global healthcare through a comprehensive understanding of the oral - systemic health axis.

### MISSION

Exploring the bidirectional relationship of the oral-systemic health axis.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the salivary levels of *Fusobacterium nucleatum* in patients with colorectal carcinoma: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the diagnostic accuracy of salivary procalcitonin in bacterial-induced systemic inflammation: a systematic review and meta-analysis.



## KATA SÁRA HABA

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

26 years

### EDUCATION

dentist

### SUPERVISOR(S)

Dániel Végh, Dóra Haluszka

### E-MAIL

haba.kata@semmelweis.hu

### TOPIC

Oral complications of type II diabetes mellitus.

### VISION

Improve the life quality of patients with diabetes.

### MISSION

Assess the potential oral complications of diabetes and target them.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Correlation between salivary glucose level and blood glucose level: a systematic review and meta-analysis.

#### PROJECT 2:

Evaluating oral hygiene and periodontal complications in patients with hyperglycemia: a systematic review and meta-analysis



## DÁNIEL HORVÁTH

DEPARTMENT OF ORAL DIAGNOSTICS, SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

dentist

### SUPERVISOR(S)

Andrea Bródy

### E-MAIL

horvath.daniel.dmd@gmail.com

### TOPIC

Artificial intelligence in oral medicine.

### VISION

An artificial intelligence based guide for clinicians, that helps to diagnose and treat oral medicine patients.

### MISSION

Verify artificial intelligence as a reliable support for clinicians, find the possibilities and limitations of the technology.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the diagnostic accuracy of artificial intelligence in oral potentially malignant disorders: a systematic review and meta-analysis.

#### PROJECT 2:

Prognostic evaluation of diagnostic criteria in oral lichen planus on histological images by artificial intelligence: Registry analysis



## CAROLINE KELLY

DEPARTMENT OF RESTORATIVE DENTISTRY AND ENDODONTICS, SEMMELWEIS UNIVERSITY



### AGE

26 years

### EDUCATION

dentist

### SUPERVISOR(S)

Zsolt Lohinai, Beáta Kerémi

### E-MAIL

ckellysemmel@gmail.com

### TOPIC

Investigating the correlation between oral health and comorbidities.

### VISION

Reduce the number of comorbidities associated with oral lesions.

### MISSION

Educate the population on the importance of oral health and its impact on our general health.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the prevalence of bacteria in periodontal pockets and atherosclerotic plaques in patients with atherosclerosis: a systematic review and meta-analysis.

#### PROJECT 2:

Effects of nonsurgical endodontic treatment on risk-biomarkers for cardiovascular disease: a systematic review and meta-analysis.



## PATRIK KREUTER

DEPARTMENT OF PAEDIATRIC DENTISTRY AND ORTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

25 years

### EDUCATION

dentist

### SUPERVISOR(S)

Noémi Katinka Rózsa, Dorottya Bányai

### E-MAIL

kreuterpatrik@gmail.com

### TOPIC

The latest advancements in digital orthodontics.

### VISION

Help more people smile confidently.

### MISSION

Create more accessible orthodontic treatments.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the differences in root resorption between fixed appliances and aligners in permanent dentition: a systematic review and meta-analysis.

#### PROJECT 2:

Analyzing the failure rate and adverse effects with indirectly versus manually bonded orthodontic brackets: randomized clinical trial.



## PÉTER MÁRTON

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

24 years

### EDUCATION

dentistry student

### SUPERVISOR(S)

Emese Ábrám

### E-MAIL

mpeti586@gmail.com

### TOPIC

Mechanical and optical properties of enamel and dentin.

### VISION

Help to define dental esthetics with the academic language of science.

### MISSION

Specify what natural-looking means scientifically.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of tooth whitening on enamel structure: a systematic review and meta-analysis.

#### PROJECT 2:

Evaluation of the color change and patient-oriented outcomes after teeth whitening in in vivo studies: a systematic review and meta-analysis.



## ÉVA MLINKÓ

DEPARTMENT OF PAEDIATRIC DENTISTRY AND ORTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

37 years

### EDUCATION

dentist

### SUPERVISOR(S)

Noémi Katinka Rózsa,  
Gábor Varga

### E-MAIL

mlinko.eva@dent.semmelweis-univ.hu

### TOPIC

Developmental Defects of Enamel: etiological aspects and clinical management

### VISION

Improve the life quality of children with Developmental Defects of Enamel with better clinical assessment

### MISSION

Discover causes of Developmental Defects of Enamel and finding new intervention protocols that are improving paediatric dentistry.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating different types of antibiotics at early childhood as risk factors in Molar Incisor Hypomineralization (MIH) : a systematic review and meta-analysis

#### PROJECT 2:

Investigation the association between phospho-calcic metabolism disorders and Developmental Defects of Enamel: a systematic review and meta-analysis



## ADÉL ESZTER MÓZES

DEPARTMENT OF PEDIATRIC DENTISTRY AND ORTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

dentist

### SUPERVISOR(S)

Noémi Katinka Rózsa, Nándor Ács

### E-MAIL

mozesadel@yahoo.com

### TOPIC

Exploring HPV-associated diseases in different anatomical areas and their preventive measures.

### VISION

Decrease the prevalence of HPV caused diseases.

### MISSION

Find the best options for HPV prevention and detection.

### SPECIFIC GOALS

#### PROJECT 1:

The prevalence of oral HPV infection in cervical HPV-positive women: a systematic review and meta-analysis.

#### PROJECT 2:

Analyzing the concordance and risk factors between oral and genital HPV: single-centre cohort analysis  
Analyzing of the dynamics and trends of HPV infection among couples: an observational study



## LILIÉN NAGY

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

29 years

### EDUCATION

dentist

### SUPERVISOR(S)

Zoltán Gécz

### E-MAIL

nagylilien0828@gmail.com

### TOPIC

Evaluating the mechanical and antipathogenic characteristics of dental polymers.

### VISION

Decrease the incidence of denture fracture and stomatitis.

### MISSION

Development of a denture material with both antipathogenic and good mechanical characteristics.

### SPECIFIC GOALS

#### PROJECT 1:

Evaluation of flexural strength and antimicrobial characteristic of polymethyl metacrylate incorporated with silver nanoparticles: a systematic review and meta-analysis.

#### PROJECT 2:

Evaluation of mechanical and antimicrobial characteristics of polymethyl metacrylate incorporated with titanium dioxide nanoparticles: a systematic review and meta-analysis



## ELIAS-LEON NOLDEN

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

24 years

### EDUCATION

medical student

### SUPERVISOR(S)

Mihály Vaszilko, László Köles

### E-MAIL

el-nolden@t-online.de

### TOPIC

Implication of personalised medicine in maxillofacial surgery.

### VISION

Customization driven Optimization for better Patient results.

### MISSION

Provide better clinical decisions based on research.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing Patient-Specific Implants and Stock System in Patients with TMJ-Reconstruction: A systematic review and meta-analysis.

#### PROJECT 2:

Comparing Patient-Specific Implants and Stock System in Patients undergoing cranioplasty: a systematic review and meta-analysis.



## FLÓRA HELGA OLASZ

DEPARTMENT OF PAEDIATRIC DENTISTRY AND ORTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

dentist

### SUPERVISOR(S)

Noémi Katinka Rózsa

### E-MAIL

floraolasz@gmail.com

### TOPIC

Investigating the effectiveness and safetiness of presurgical therapy possibilities for unilateral cleft lip and palate in infants.

### VISION

Gold standard for presurgical nasoalveolar molding treatment.

### MISSION

Research existing techniques and compare them.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effectiveness and safetiness of presurgical therapy possibilities for unilateral cleft lip and palate in infants: a systematic review and meta-analysis.

#### PROJECT 2:

Seasonality in birth months of patients born with orofacial cleft in Hungary - registry analysis



## PETRA PAPÓCSI

DEPARTMENT OF ORO-MAXILLOFACIAL SURGERY AND STOMATOLOGY, SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

dentist

### SUPERVISOR(S)

Zsolt Németh

### E-MAIL

petra.papocsi@gmail.com

### TOPIC

Fixation techniques used in the therapy of jaw fractures.

### VISION

Learning and utilizing the latest techniques in the case of patients with jaw fractures.

### MISSION

Using a faster and more comfortable splinting technique during the night duty.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of the currently used methods in treatment of jaw fractures: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the prevalence of different maxillofacial injuries in adults related to electric scooter or electric bike using: a systematic review and meta-analysis.



## ADRIENN PÁL

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

dentist

### SUPERVISOR(S)

Ivett Róth

### E-MAIL

paladrienn0413@gmail.com

### TOPIC

Evaluation of tooth preparation designs for ceramic crowns.

### VISION

Offer patients the highest level of precision and accuracy in dental restorations, ensuring optimal oral health and satisfaction.

### MISSION

Deliver evidence-based recommendations to dental professionals, guiding their selection of the most appropriate finish line design for ceramic crowns.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy of different finish line on ceramic restorations: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effect of wax pattern manufacturing techniques on the marginal fit of lithium disilicate crowns: a systematic review and meta-analysis.



## BÁLINT ZSOMBOR SÁRAI

DENTAL AND ORAL SURGERY TEACHING INSTITUTE, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

dentist

### SUPERVISOR(S)

Orsolya Németh

### E-MAIL

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### TOPIC

Daily aspect of oral medicine.

### VISION

Achieve affordable and good oral health for everyone.

### MISSION

Make a positive difference in all patients life.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy of steroid and calcineurin inhibitor treatment in Oral Lichen Planus: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the efficacy of different methods in detection of oral potentially malignant disorders: a systematic review and meta-analysis.



## ZSÓFIA ÉVA VINCZE

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY

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### AGE

27 years

### EDUCATION

dentist

### SUPERVISOR(S)

Krisztina Márton

### E-MAIL

[vincze.zsofia@dent.semmelweis-univ.hu](mailto:vincze.zsofia@dent.semmelweis-univ.hu)

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### TOPIC

Examination of CAD/CAM produced complete dentures.

### VISION

Resocialise edentulous patients by the help of an aesthetic and well functioning complete denture.

### MISSION

Provide a durable and feasible complete denture for edentulous patients.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the mechanical properties of denture base resins: a systematic review and meta-analysis.

#### PROJECT 2:

Evaluation of microbial adhesion of traditional PMMA resins and CAD/CAM based dentures: a systematic review and meta-analysis.

GROUP 3  
**GYNECOLOGY &  
UROLOGY**





# GROUP 3 GYNECOLOGY & UROLOGY



## INTRODUCTION TO THE GROUP

The Gynecology and Urology group comprises 12 students and 15 supervisors, collectively engaged in various medical disciplines such as gynecology, obstetrics, urology, andrology, plastic surgery, biostatistics, and physiotherapy. Given their range of interests, the research agenda of this group covers a broad spectrum of topics, including oncoplastic breast surgery, penile and urothelial cancer, postpartum depression, physiotherapy techniques for pelvic pain, risk factors for congenital anomalies, cervical insufficiency, and vaginal microbiota. The group aims to advance clinical practice and contribute positively to patient outcomes. For this purpose, each student is actively involved in thoroughly conducting a systematic review and meta-analysis. Altogether, this group will conduct 21 of them. Furthermore, some students are involved in conducting registry analyses and international surveys. The SMSs of the group are Anett Rancz, Isabel Amorim, Mahmoud Obeidat, and Szilárd Vánicsa. The group is led by Nándor Ács, the president of the Hungarian Society of Gynecology and a well-known international researcher in the field of gynecology. Péter Nyirády is the director of the Hungarian Academy of Sciences, Dean of the Faculty of Medicine, and an international authority in the field of andrology and urology.

## MEMBERS OF THE GROUP

**NÁNDOR ÁCS**  
Group Leader  
09/23  
05/24

**ANETT RANCZ**  
Scientific Methodology Supervisor  
06/22  
06/23  
01/24

**ISABEL AMORIM**  
Scientific Methodology Supervisor  
02/24

**MAHMOUD OBEIDAT**  
Scientific Methodology Supervisor  
07/23  
11/22  
09/23  
03/24

**SZILÁRD VÁNCSA**  
Scientific Methodology Supervisor  
08/23

**MIKOLT BAKONY**  
Statistician  
09/23

**TAMÁS KÓI**  
Statistician  
12/22  
08/23

**STUDENTS:** Mohammed Altenni, Gökçe Can, András Czébely-Lénárt, Lőrinc Frivaldszky, Hanna Gizaw, Árpád Ágoston Jankó, Kincső Lőrincz, Loretta Enikő Nyirády, Zihan Suo, Leila Tigharghar, Boglárka Túri, Judit Vargha

**SUPERVISORS:** Nándor Ács, Ferenc Bánhid, János Gidai, Márton Keszthelyi, Zoltán Klárik, Balázs Lintner, Ágnes Mayer, Zsolt Melczer, Petra Nóra Merkely, Péter Nyirády (Supervisor of the month: **March 2022**), Péter Riesz, Tibor Szarvas (Supervisor of the month: **December 2022, May 2023**), Attila Szijártó, Szabolcs Várbíró, Márton Vezér



## MOHAMMED ALTENNI

PÉTERFY SÁNDOR HOSPITAL



### AGE

38 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Tibor Szarvas

### E-MAIL

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### TOPIC

Novel Treatment of Advanced Urothelial Cancer.

### VISION

Serve bladder cancer patients with compassion, professionalism, integrity, and excellence.

### MISSION

Provide outstanding clinical treatment for patients with urothelial cancer in a strong academic environment.

### SPECIFIC GOALS

#### PROJECT 1:

Identifying patients who would benefit from enfortumab vedotin in advanced urothelial cancer: a systematic review and meta-analysis.

#### PROJECT 2:

Identifying patients who would benefit from immune checkpoint inhibitors in advanced urothelial cancer: a systematic review and meta-analysis.



## GÖKÇE CAN

DEPARTMENT OF PHYSIOTHERAPY, SEMMELWEIS UNIVERSITY



### AGE

26 years

### EDUCATION

physiotherapist

### SUPERVISOR(S)

Ágnes Mayer, Nándor Ács

### E-MAIL

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### TOPIC

The Role of Various Physiotherapy Modalities in the Treatment of Pelvic Pain Syndromes.

### VISION

Endometriosis pain will be alleviated with the knowledge of advanced physiotherapy methods.

### MISSION

Enhance the quality of physiotherapy treatments for patients, resulting in better patient outcomes and overall well-being.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effectiveness of physiotherapy methods in women with endometriosis-associated pelvic pain: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effectiveness of physiotherapy methods in women with menstrual pain: a systematic review and meta-analysis.



## ANDRÁS CZÉBELY-LÉNÁRT

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, SEMMELWEIS UNIVERSITY



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Ferenc Bánhidly, Balázs Lintner

### E-MAIL

czebely.andras@semmelweis.hu

### TOPIC

The application of Enhanced Recovery After Surgery protocol to improve patient outcomes after surgeries.

### VISION

No patients will undergo unnecessary preoperative interventions.

### MISSION

Emphasize leaving the old methods behind based on the Enhanced Recovery After Surgery recommendations.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the patient outcomes in bowel resection surgeries with and without mechanical bowel preparation: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the advantages of early-feeding versus fasting after bowel resection surgeries: a systematic review and meta-analysis.

**AGE**

27 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Márton Keszthelyi

**E-MAIL**

florinc1397@protonmail.com

## LŐRINC FRIVALDSZKY

BETHESDA CHILDREN'S HOSPITAL

**TOPIC**

Novel approaches in prevention of postpartum depression.

**VISION**

Improve quality of life of women undergoing cesarean section.

**MISSION**

Find pharmacological methods that can prevent postoperative complications and improve the quality of life of women undergoing cesarean section.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the efficacy and safety of esketamine on postpartum depression in women undergoing cesarean section: a systematic review and meta-analysis.

**PROJECT 2:**

Investigating the efficacy and safety of immediate postpartum administration of long-acting reversible contraception methods: a systematic review and meta-analysis.

**AGE**

27 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Nándor Ács, János Gidai

**E-MAIL**

gizawhanna1@gmail.com

## HANNA GIZAW

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, SEMMELWEIS UNIVERSITY

**TOPIC**

The effect of paternal age on the development of congenital anomalies.

**VISION**

Better antenatal care and higher quality of life for the newborns.

**MISSION**

Provide evidence on optimal paternal age for having children.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the influence of paternal age on the development of congenital anomalies: a systematic review and meta-analysis.

**PROJECT 2:**

Investigating the influence of paternal age on the development of congenital anomalies in the Hungarian population between 1980 and 2009: a population based study.

**AGE**

25 years

**EDUCATION**

medical student

**SUPERVISOR(S)**

Szabolcs Várbíró, Márton Keszthelyi

**E-MAIL**

jankoarpi@gmail.com

## ÁRPÁD ÁGOSTON JANKÓ

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY

**TOPIC**

Effect of oral contraceptives on metabolic balance.

**VISION**

Find potential physiological changes and long-term health implications for individuals using these medications.

**MISSION**

Identify a high-risk population and determine the optimal combination in terms of metabolic parameters.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the effect of oral contraceptives on carbohydrate metabolism in women of reproductive age: a systematic review and meta-analysis.

**PROJECT 2:**

Investigating the effect of oral contraceptives on carbohydrate metabolism in women with PCOS: a systematic review and meta-analysis





## KINCSŐ LŐRINCZ

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

26 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Ferenc Bánhidly, Márton Vezér

### E-MAIL

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### TOPIC

Uterine closure layering following cesarean section.

### VISION

Post-cesarean section women without complications.

### MISSION

Finding the c-section closure technique with the least amount of complications.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of different cesarean section layering techniques: a systematic review and meta-analysis.

#### PROJECT 2:

Comparison of safety and efficacy between laparoscopic myomectomy and traditional laparotomy for patients with uterine fibroids: a systematic review and meta-analysis.



## LORETTA ENIKŐ NYIRÁDY

CENTRE FOR TRASLATIONAL MEDICINE, SEMMELWEIS UNIVERSIT



### AGE

23 years

### EDUCATION

medical student

### SUPERVISOR(S)

Zoltán Klárik, Attila Szijártó

### E-MAIL

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### TOPIC

Oncoplastic breast surgery and its clinical significance.

### VISION

Find the best technique, which results in the safest oncological and the best aesthetic outcome.

### MISSION

To aim for perfection in breast reconstruction.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the safety and effectiveness of volume displacement and replacement techniques in oncoplastic breast-conserving surgery: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the safety and effectiveness of polyurethane breast implants compared to alternatives in high risk population: a systematic review and meta-analysis.



## ZIHAN SUO

IMPERIAL COLLEGE LONDON



### AGE

24 years

### EDUCATION

nurse

### SUPERVISOR(S)

Nándor Ács

### E-MAIL

zihan.suo@phd.semmelweis.hu

### TOPIC

The relation between maternal factors and birth defects.

### VISION

Increased mother awareness and education and fewer cardiac birth defects.

### MISSION

Provide closer maternity counseling to prevent cardiac birth defects.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the association between maternal risk factors and cardiac birth defects: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the association between maternal medication and cardiac birth defects: a systematic review and meta-analysis.



## LEILA TIGHARGHAR

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

dentist

### SUPERVISOR(S)

Nándor Ács, Petra Nóra Merkely

### E-MAIL

leila0517@gmail.com

### TOPIC

The risk factors of preterm birth and their management.

### VISION

Make cervical insufficiency an easily manageable disease.

### MISSION

Find the most effective treatment for cervical insufficiency by applying up to date scientific results.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy of different therapeutic modalities for cervical insufficiency on prevention of preterm birth: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the link between cervical insufficiency and the development of pelvic organ prolapse: a systematic review and meta-analysis.



## BOGLÁRKA TÚRI

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

32 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zsolt Melczer

### E-MAIL

dr.feher.boglarka@gmail.com

### TOPIC

Altered vaginal flora in pregnancy.

### VISION

Pregnant women will have better outcomes due to professional prenatal care.

### MISSION

To find new possibilities of screening and treatment of genital mycoplasmas in pregnancy.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of genital mycoplasmas on adverse pregnancy outcomes: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effect of genital mycoplasmas on adverse outcomes in pregnancies at risk for preterm birth: a systematic review and meta-analysis



## JUDIT VARGHA

DEPARTMENT OF UROLOGY, SEMMELWEIS UNIVERSITY



### AGE

39 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Riesz, Péter Nyirády

### E-MAIL

varghacsu@gmail.com

### TOPIC

Novel treatment approaches in penile cancer.

### VISION

Improving the life expectancy of patients with penile cancer.

### MISSION

Searching for a more effective therapy for advanced penile cancer patients.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing efficacy and safety of immunotherapy or chemotherapy in penile cancer patients: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effectiveness and safety of penile cancer immunotherapy versus chemotherapy, PENCIL study: International survey.

GROUP 4

# DERMATOLOGY & MISCELLANEOUS





# GROUP 4

## DERMATOLOGY & MISCELLANEOUS



### INTRODUCTION TO THE GROUP

The combined Miscellaneous and Dermatology-Immunology group brings together a multidisciplinary team of experts, supervisors, and students to tackle a broad array of research topics in neurocognition, dermatology, immunology, and beyond. The group is spearheaded by Andras Attila Horvath, a distinguished neurocognitive researcher, alongside András Bánvölgyi and Norbert Kiss, leaders in dermatology and immunology. With a total of 14 supervisors and 14 students, the team explores diverse areas, including dementia, cognitive impairment, metabolic disturbances, stroke imaging, autoimmune skin disorders, allergic reactions, infectious diseases, motion and gait analysis, and teledermatology. They manage 29 ongoing projects, comprising systematic reviews, meta-analyses, clinical trials, observational studies, and registry analyses. The group also receives methodology guidance from two supervisors, Marie Engh and Fanni Adél Meznerics.

### MEMBERS OF THE GROUP



**ANDRÁS BÁNVÖLGYI**  
*Group Leader*



**ANDRÁS HORVÁTH**  
*Group Leader*



**NORBERT KISS**  
*Group Leader*



**MARIE ANNE ENGH**  
*Scientific Methodology Supervisor*



**FANNI ADÉL MEZNERICS**  
*Scientific Methodology Supervisor*



**RÉKA TÓTH**  
*Statistician*



**BENCE SZABÓ**  
*Statistician*



**ANNA WALTER**  
*Statistician*

**STUDENTS:** Renáta Árok, Azamat Bissenov, Laura Anna Bokor, Lili Gulyás, Alexander Kancsev, Andrea Lancz, Tímea Lázár, Katalin Martyin, Alzahra Ahmed Mohammed, Eszter Radics, István Szondy, Noémi Nóra Varga, Eszter Éva Virág-Tulassay, Esra Zhubi

**SUPERVISORS:** Orsolya Gresits, Bence Gunda, András Attila Horváth, Szabolcs Kéri (Supervisor of the month: **September 2023**), Tamás Terebessy (Supervisor of the month: **October 2022, March 2024**), Gábor Skaliczki



## RENÁTA ÁROK

BAJCSY-ZSILINSZKY HOSPITAL AND CLINIC



### AGE

35 years

### EDUCATION

pharmacist

### SUPERVISOR(S)

Norbert Kiss, András Bánvölgyi,  
Fanni Adél Meznerics

### E-MAIL

renaro0207@gmail.com

### TOPIC

New approaches in the management of dermatological side effects caused by targeted oncological therapies.

### VISION

Patients treated with targeted oncology therapy could have a better quality of life.

### MISSION

Finding new approaches to manage skin toxicity adverse events and providing to patients appropriate advices for skin care.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy of preventive and therapeutic options for kinase inhibitory therapy-induced skin toxicity: a systematic review and meta-analysis.

#### PROJECT 2:

Comparing the efficacy and safety treatment of cutaneous squamous cell carcinoma: a systematic review and meta-analysis.



## AZAMAT BISSENOV

DEPARTMENT OF ORTHOPAEDICS, SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Tamás Terebessy, Orsolya Gresits

### E-MAIL

bissenov.azamat@phd.semmelweis.hu

### TOPIC

Mobile motion analysis.

### VISION

High quality health-conscious behavior and personalized medical care for disabled people.

### MISSION

Widespread use of mobile motion analysis for easier diagnose and more accurate treatment of musculoskeletal disorders.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing inertial measurement-based motion tracking results with 3D gait analysis results: a systematic review and meta-analysis.

#### PROJECT 2:

Evaluating the Validity and Reliability of Inertial Measurement Unit (IMU) for Balance Assessment: A systematic review and meta-analysis



## LAURA ANNA BOKOR

DEPARTMENT OF DERMATOLOGY, VENEREOROLOGY AND DERMATOONCOLOGY, SEMMELWEIS UNIVERSITY



### AGE

26 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Bernadett Hidvégi,  
András Bánvölgyi

### E-MAIL

bokor.laura@gmail.com

### TOPIC

Clinicopathological evaluation of cutaneous lupus

### VISION

Improve the quality of life of patients suffering from cutaneous lupus.

### MISSION

Find more efficient therapeutic options for cutaneous lupus.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of different therapeutical options in cutaneous lupus: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the epidemiological background of cutaneous lupus: a systematic review and meta-analysis.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Bokor L. A. et al. (2024) Deucravacitinib shows superior efficacy and safety in cutaneous lupus erythematosus compared to various biologics and small molecules - A systematic review and meta-analysis. *Autoimmun Rev*, **D1**, IF: **9.200**

**AGE**

26 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Kende Kálmán Lőrincz,  
András Bánvölgyi

**E-MAIL**

gulyaslili1998@gmail.com

## LILI GULYÁS

DEPARTMENT OF DERMATOLOGY, VENERELOGY AND  
DERMATOONCOLOGY, SEMMELWEIS UNIVERSITY

**TOPIC**

Biomarkers in the Diagnosis and  
Prognosis of Cutaneous Melanoma

**VISION**

Improve the monitoring of skin  
diseases to increase patient survival  
and therapeutic efficacy.

**MISSION**

Identify the most effective serum  
biomarkers for disease monitoring.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the predictive value of  
different biomarkers for post-diagnostic  
events in malignant melanoma: a  
systematic review and meta-analysis.

**PROJECT 2:**

Investigating safety and efficacy of  
Systemic Therapies in Locally Advanced  
and Metastatic Basal Cell Carcinoma: a  
systematic review and meta-analysis.

**AGE**

35 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Szabolcs Kéri

**E-MAIL**

kancsevalexander@gmail.com

## ALEXANDER KANCSEV

JÓSA ANDRÁS HOSPITAL NYÍREGYHÁZA

**TOPIC**

The association between metabolic  
syndrome and cognitive dysfunctions  
in schizophrenia.

**VISION**

Schizophrenia being a manageable  
condition compatible with a fulfilling  
life.

**MISSION**

Understand the relationship between  
metabolism and cognitive  
dysfunctions in schizophrenia.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the effect of impaired glucose  
homeostasis on cognitive functions in  
schizophrenia: a systematic review and  
meta-analysis.

**PROJECT 2:**

Investigating the association between  
cognition, visual dysfunctions, and  
metabolic syndrome in patients with  
schizophrenia Registry establishment and  
analysis

**AGE**

36 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

András Bánvölgyi, Norbert  
Kiss, Fanni Adél Meznerics

**E-MAIL**

andrea.lancz@gmail.com

## ANDREA LANCZ

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY

**TOPIC**

Management of itching: new insights  
in the treatment of urticaria and  
prurigo nodularis

**VISION**

Patients with prurigo nodularis could  
have a better quality of life.

**MISSION**

Optimizing the treatment of prurigo  
nodularis.

**SPECIFIC GOALS****PROJECT 1:**

Comparing the safety and efficacy of  
biologics in prurigo nodularis: a systematic  
review and meta-analysis.

**PROJECT 2:**

Investigating the safety and efficacy of  
biologics in chronic urticaria: a systematic  
review and meta-analysis.



## TÍMEA LÁZÁR

UNIVERSITY OF PÉCS



### AGE

30 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

András Attila Horváth

### E-MAIL

lazartimi200612@gmail.com

### TOPIC

The utility of risk scores in the prediction of dementia in adults.

### VISION

All dementia cases can be predicted before the onset of symptoms.

### MISSION

Find the best risk score to accurately predict dementia.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the predictive value of dementia risk scores in adults: a systematic review and meta-analysis.

#### PROJECT 2:

Determining the most influential components of dementia risk scores in adults: Machine-learning based cohort analysis.



## KATALIN MARTYIN

DEPARTMENT OF DERMATOLOGY, VENEREOROLOGY AND DERMATOONCOLOGY, SEMMELWEIS UNIVERSITY



### AGE

25 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

András Bánvölgyi, Norbert Kiss

### E-MAIL

martyinkata@gmail.com

### TOPIC

New insights into the application of teledermatology

### VISION

The latest technological improvements should be implemented in patient care as soon as possible.

### MISSION

Providing reliable data to facilitate the widespread use of teledermatology.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the diagnostic accuracy of teledermatology systems to face-to-face examination in the diagnosis of skin diseases: A systematic review and meta-analysis.

#### PROJECT 2:

Investigating the diagnostic accuracy of artificial intelligence systems in diagnosis of skin diseases: a systematic review and meta-analysis.



## ALZAHRA AHMED MOHAMMED

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

24 years

### EDUCATION

medical student

### SUPERVISOR(S)

Lajos Kemény, Zsuzsanna Kurgyis

### E-MAIL

alzahramkhalid@gmail.com

### TOPIC

The management of vitiligo.

### VISION

Improve the quality of life of vitiligo patients.

### MISSION

Enhancing vitiligo treatment by bridging basic science with clinical care.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of the use of JAK inhibitors in the treatment of vitiligo: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the prevalence of cancers in vitiligo patients: a systematic review and meta-analysis.

**AGE**

29 years

**EDUCATION**

cognitive neuroscientist

**SUPERVISOR(S)**

András Attila Horváth

**E-MAIL**

eszteradics@gmail.com

## ESZTER RADICS

DEPARTMENT OF ANATOMY, HISTOLOGY AND EMBRYOLOGY,  
SEMMELWEIS UNIVERSITY**TOPIC**

The link between cognitive training and neuroplasticity in mild cognitive impairment.

**VISION**

All preventable dementia cases are prevented.

**MISSION**

Evaluate and optimize cognitive trainings to delay or prevent dementia.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the effectiveness of cognitive training in adults: a systematic review and meta-analysis.

**PROJECT 2:**

Advancing initiatives of dementia risk reduction: A Survey

**AGE**

26 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

András Bánvölgyi

**E-MAIL**

szondyistil@gmail.com

## ISTVÁN SZONDY

DEPARTMENT OF DERMATOLOGY, VENEREOLOGY AND  
DERMATOONCOLOGY, SEMMELWEIS UNIVERSITY**TOPIC**

The role of prevention and early interventions in autoinflammatory and venereal diseases

**VISION**

Prevent complications with prevention and early interventions in autoinflammatory and venereal diseases.

**MISSION**

Help the translation of pioneering therapeutic interventions into clinical practice.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the efficacy and safety of doxycycline pre-exposure and post-exposure prophylaxis in preventing sexually transmitted

**PROJECT 2:**

Investigating the effectiveness of meningococcal vaccines in the prevention of gonorrhoea: a systematic review and meta-analysis

**PUBLISHED ARTICLE(S)****PROJECT 1:** Szondy I. et al. (2024) Doxycycline prophylaxis for the prevention of sexually transmitted infections: a systematic review and meta-analysis of randomised controlled trials. *Int J Infect Dis*, Q1, IF: 8.400**AGE**

26 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Norbert Kiss, Mária Medvecz

**E-MAIL**

98mimma@gmail.com

## NOÉMI NÓRA VARGA

DEPARTMENT OF DERMATOLOGY, VENEREOLOGY AND  
DERMATOONCOLOGY, SEMMELWEIS UNIVERSITY**TOPIC**

Innovative multimodal imaging techniques in dermatology

**VISION**

Improving the survival of skin tumors.

**MISSION**

Promoting the implementation of novel imaging techniques in clinical practice.

**SPECIFIC GOALS****PROJECT 1:**

Comparing the efficacy of imaging modalities for the diagnosis of malignant melanoma: A systematic review and meta-analysis.

**PROJECT 2:**

Comparing the diagnostic accuracy of imaging techniques for assessing Breslow thickness in malignant melanoma: a systematic review and meta-analysis.



## ESZTER ÉVA VIRÁG-TULASSAY

DEPARTMENT OF ORTHOPAEDICS, SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Gábor Skaliczki

### E-MAIL

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### TOPIC

Comparison of different therapies for acute anterior shoulder dislocation.

### VISION

Finding the most optimal treatment for acute anterior shoulder dislocation.

### MISSION

Compare therapies considered internationally suitable.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the safety and efficacy of different therapies for acute anterior shoulder dislocations– Systematic Review and Network Meta-Analysis

#### PROJECT 2:

Comparing the Accuracy and Consistency of 3D MRI with 3D CT in Assessing Glenohumeral Instability



## ESRA ZHUBI

DEPARTMENT OF NEUROLOGY, UNIVERSITY CLINICAL CENTER OF KOSOVO



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Bence Gunda

### E-MAIL

esrazhubi@gmail.com

### TOPIC

Treatment of ischemic stroke.

### VISION

Early treatment of stroke and disability-free patients.

### MISSION

Make a meaningful impact on stroke prevention and treatment through extensive research.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the predictive accuracy of magnetic resonance imaging (MRI) for worse outcomes in stroke patients who underwent intravenous thrombolysis (IVT): a systematic review and meta-analysis.

#### PROJECT 2:

Comparing combined intravenous thrombolysis and endovascular thrombectomy and direct endovascular thrombectomy in acute basilar artery strokes: a systematic review and meta-analysis

GROUP 5  
**PEDIATRICS**





# GROUP 5 PEDIATRICS



## INTRODUCTION TO THE GROUP

Our pioneering pediatric group includes 12 students and 7 supervisors, each with a unique mastery of different medical fields. Alongside resident doctors, this group includes pediatricians, conductive educators, pharmacists, and psychiatrists, broadening the scope of expertise within our ranks. Their research is diverse, encompassing areas such as pediatric oncology, gastroenterology, neurology, psychiatry, rare genetic disorders, and conductive education. This cohort is a tapestry of national talent, with students joining us from across the country's esteemed institutions, including the Pediatric Center of Semmelweis University, Heim Pál National Institute of Pediatrics, Bethesda Children's Hospital, Pető András Institute, Institute of Genomic Medicine and Rare Disorders, Bács-Kiskun County Hospital, and the addition of a distinguished student from Syria. Our students embarked on their academic voyage with systematic reviews, while also designing clinical trials, registry analyses, and international surveys, addressing pivotal questions in their specialized fields. The group's Scientific Methodology Supervisors; Mahmoud Obeidat, Rita Nagy and Márk Hernádfői, are instrumental in refining the methodological quality of these projects. At the helm of this gifted group are Miklós Garami, András Fogarasi and Andrea Párniczky, each a luminary in their own right, known for their significant contributions to both research and clinical practice in their individual specialties and in the broader field of pediatrics.

## MEMBERS OF THE GROUP



**MIKLÓS GARAMI**  
*Group Leader*



**ANDRÁS FOGARASI**  
*Group Leader*



**MAHMOUD OBEIDAT**  
*Scientific Methodology Supervisor*



**RITA NAGY**  
*Scientific Methodology Supervisor*



**MÁRK HERNÁDFŐI**  
*Scientific Methodology Supervisor*



**TAMÁS KÓI**  
*Statistician*



**RÉKA TÓTH**  
*Statistician*

**STUDENTS:** Seba Aljomaa, Miklós Bartók, Nóra Beke, Blanka Rebeka Bódy, Barbara Csendes, Judit Xenia Jockers, Emese Kasznár, Dorottya Kenesei, Tímea Lőrincz-Molnár, Regina Molnár, Anita Pfeffer, Krisztina Szalkay, Ádám Szilágyi

**SUPERVISORS:** Kinga Farkas, András Fogarasi, Miklós Garami (Supervisor of the month: **February 2024**), Mária Judit Molnár, Katalin Müller (Supervisor of the month: **February 2023**), Klementina Ocskay (Supervisor of the month: **October 2023**), Andrea Párniczky, Márta Szegedi, Dóra Török, Andrea Zsebe



## SEBA ALJOMAA

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

34 years

### EDUCATION

pharmacist

### SUPERVISOR(S)

Miklós Garami

### E-MAIL

aljomaa.seba@phd.semmelweis.hu

### TOPIC

Novel Digital Health Approaches in Oncology

### VISION

Improve quality of life in oncology via new approaches.

### MISSION

Finding the best digital health interventions for cancer patients.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the Effect of Digital Health Interventions on the Quality of Life of Individuals Facing Cancer: Systematic Review and Meta-analysis.

#### PROJECT 2:

Hungarian Adaptation and Validation of the Hematology/Oncology Module of the Pediatric Quality of Life Inventory (PedsQL): Cultural Adaptation and Pilot Study.



## MIKLÓS BARTÓK

BÁCS KISKUN COUNTY HOSPITAL SZTE ÁOK TEACHING HOSPITAL KALOCSA SITE; NEONATAL, INFANT AND CHILDREN'S DEPARTMENT



### AGE

35 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Miklós Garami

### E-MAIL

drbartok.miklos@gmail.com

### TOPIC

The Importance of Social Determinants in Childhood Patient with Malignancies

### VISION

Prevent Childhood Malignancies.

### MISSION

Identify and Eliminate Contributing Factors.

### SPECIFIC GOALS

#### PROJECT 1:

Association Between Socioeconomic Measures and the Risk of Childhood Malignancies: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating Glutamine Effect on Oral Mucositis in Childhood Cancer Patient: Randomized Controlled Trial.



## NÓRA BEKE

PEDIATRIC CENTER, TÚZOLTÓ STREET DEPARTMENT, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Miklós Garami

### E-MAIL

beke.nora977@gmail.com

### TOPIC

Treatment Related Cardiotoxicity in Pediatric Oncology

### VISION

Cancer patients should have good life quality without heart complications.

### MISSION

Cancer patients should have good life quality without heart complications.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the Diagnostic Tools Accuracy for Early Detection of Cardiac Failure in Pediatric Oncology: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating The Long-term Side Effects of Additional Cardioprotective Dexrazoxane During Chemotherapy in Childhood Cancer Survivors: Systematic Review and Meta-analysis.



## BLANKA REBEKA BÓDY

HEIM PÁL CHILDREN'S HOSPITAL



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Andrea Párniczky,  
Klementina Ocskay

### E-MAIL

body7991@gmail.com

### TOPIC

The role of gut microbiota in cystic fibrosis

### VISION

Offer a complication-free life for people with cystic fibrosis.

### MISSION

Investigating the role of gut microbiota in the disease.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the gut microbiota in cystic fibrosis patients and healthy individuals: a systematic review and meta-analysis.

#### PROJECT 2:

Investigation of gut dysbiosis in cystic fibrosis patients according to glucose tolerance status: Registry analysis.



## BARBARA CSENDES

INSTITUTE OF GENOMIC MEDICINE AND RARE DISORDERS,  
SEMMELWEIS UNIVERSITY



### AGE

31 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Mária Judit Molnár, Márta Szegedi

### E-MAIL

csbaboka@gmail.com

### TOPIC

Impact of new genomic technologies on patient care

### VISION

Boost the effective utilization of genomic technologies.

### MISSION

Recommend, develop, and support educational and financial policies.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effectiveness, safety and costs of orphan medicinal products in spinal muscular atrophy: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the health-economical impact of orphan medicinal products for patients with spinal muscular atrophy: Prospective follow-up study.



## JUDIT XENIA JOCKERS

PEDIATRIC CENTER, TÚZOLTÓ STREET DEPARTMENT,  
SEMMELWEIS UNIVERSITY



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Miklós Garami

### E-MAIL

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### TOPIC

Investigating the association between the genotype and phenotype of pediatric patients with polyposis syndromes

### VISION

Improving the quality of life and enhancing chances of survival in patients with polyposis syndrome.

### MISSION

Develop a more accurate diagnostic and management protocol by monitoring through the genotype-phenotype association.

### SPECIFIC GOALS

#### PROJECT 1:

Develop a more accurate diagnostic and management protocol by monitoring through the genotype-phenotype association: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the Association Between Vitamin D Levels and the Disease Course of Patients with Polyposis: Registry Initiation and Analysis



## EMESE KASZNÁR

HEIM PÁL CHILDREN'S HOSPITAL



### AGE

26 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Katalin Müller

### E-MAIL

mesi0301@gmail.com

### TOPIC

Physical activity in inflammatory bowel disease

### VISION

Improve the management and quality of life of inflammatory bowel disease patients.

### MISSION

Encourage inflammatory bowel disease patients to exercise for reducing disease burden.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating changes in disease activity and quality of life after physical exercise intervention in patients with inflammatory bowel disease: a systematic review and meta-analysis.

#### PROJECT 2:

Comparing physical activity between inflammatory bowel disease patients and healthy control: a systematic review and meta-analysis.



## DOROTTYA KENESEI

ANDRÁS PETŐ FACULTY, SEMMELWEIS UNIVERSITY



### AGE

33 years

### EDUCATION

conductor

### SUPERVISOR(S)

András Fogarasi, Andrea Zsebe

### E-MAIL

dorottya.kenesei@gmail.com

### TOPIC

Investigating the Effectiveness of Different Therapeutical Modalities in Cerebral Palsy

### VISION

Improving the holistic care of people with cerebral palsy.

### MISSION

Assessing the most effective therapies for people living with cerebral palsy.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effectiveness of different therapeutical modalities in cerebral palsy: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the Effect of Interval Conductive Pedagogical Rehabilitation among People with Cerebral Palsy: A Protocol of a Clinical Trial.



## TÍMEA LŐRINCZ-MOLNÁR

BETHESDA CHILDREN'S HOSPITAL



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

András Fogarasi

### E-MAIL

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### TOPIC

Develop a more accurate diagnostic and management protocol by monitoring through the genotype-phenotype association

### VISION

Help children and their families dealing with neurological disorders.

### MISSION

Improve the diagnosis of paroxysmal events in childhood.

### SPECIFIC GOALS

#### PROJECT 1:

Identification of Predictive Factors for Paroxysmal Nonepileptic Events Based on Video-EEG Monitoring: A Systematic Review and Meta-analysis.

#### PROJECT 2:

Comparative Analysis of Paroxysmal Nonepileptic Events and Epileptic Seizures in Childhood Based on a Tertiary Centre Video-EEG Registry: Cohort analysis.

**AGE**

26 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Andrea Párniczky,  
Klementina Ocskay

**E-MAIL**

reginamolnar23@gmail.com

## REGINA MOLNÁR

HEIM PÁL NATIONAL INSTITUTE FOR CHILDREN

**TOPIC**

New insights into the development of abnormal glucose tolerance in cystic fibrosis patients

**VISION**

One day cystic fibrosis-related diabetes will not worsen the life quality of cystic fibrosis patients.

**MISSION**

Providing new screening strategy for earlier diagnosis of cystic fibrosis-related abnormal glucose tolerance.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the Prevalence of islet autoantibodies in cystic fibrosis: a systematic review and meta-analysis.

**PROJECT 2:**

Comparison of islet autoantibody levels in cystic fibrosis children with different glucose tolerance status: Cohort analysis.

**AGE**

28 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Miklós Garami, Dóra Török

**E-MAIL**

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## ANITA PFEFFER

PEDIATRIC CENTER TÚZOLTÓ STREET DEPARTMENT,  
SEMMELWEIS UNIVERSITY

**TOPIC**

Short-term and long-term endocrine effects and side effects of pediatric oncological diseases and their treatment

**VISION**

Improve the survival and life quality of oncological patients.

**MISSION**

Identify the least harmful and most effective therapeutical opportunities for oncological patients.

**SPECIFIC GOALS****PROJECT 1:**

Comparing the Effectiveness and Safety of Available Therapies in Adrenocortical Carcinoma: A Systematic Review and Meta-analysis.

**PROJECT 2:**

Investigating the Efficacy and Safety of Growth Hormone Therapy for Pediatric Brain Tumor Survivors Based on Real-world Data: an International Survey

**AGE**

47 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Kinga Farkas

**E-MAIL**

szalkayk@gmail.com

## KRISZTINA SZALKAY

BETHESDA CHILDREN'S HOSPITAL

**TOPIC**

Eating and feeding difficulties in children with autism spectrum disorder - From background to tailored treatment

**VISION**

Equality for autistic children and their families.

**MISSION**

Background clarification for the most effective interventions.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the sensory aspects of eating and feeding disorders in autism: a systematic review and meta-analysis.

**PROJECT 2:**

Investigating The effect of autism on developing eating and feeding disorder among patients with sensory processing difficulties: International survey initiation.

**AGE**

27 years

**EDUCATION**

biotechnologist

**SUPERVISOR(S)**

Miklós Garami

**E-MAIL**

sziladam97@gmail.com

## ÁDÁM SZILÁGYI

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY

**TOPIC**

The Biotechnological Improvements of Clinical Hemato-oncology

**VISION**

Provide new therapeutic solutions in hemato-oncology.

**MISSION**

Show the big picture of our current knowledge about a novel therapeutic option's (CAR T cells) utility in clinical level.

**SPECIFIC GOALS****PROJECT 1:**

Comparing efficacy and toxicity of CAR T-cell versus conventional therapy in hemato-oncology: a systematic review and meta-analysis.

**PROJECT 2:**

Long-term effects of car-t cell treatment in Hematological Malignancies: A Systematic Review and Meta-analysis

GROUP 6  
**GASTROENTEROLOGY**





# GROUP 6 GASTROENTEROLOGY



## INTRODUCTION TO THE GROUP

This group includes 12 students conducting research on diverse projects within the gastroenterology field. The research projects are centered on various aspects of pancreatology, addressing topics such as pancreatitis, pancreatic cancer, pancreatic insufficiency, radiology, and psychology. Additionally, certain projects explore the correlation between cardiology and pancreatology. Also, there are projects focusing on colorectal cancer and surgery, examining multiple oncological outcomes. Within this group, there are a total of 24 ongoing projects, including 18 systematic reviews and meta-analyses, 4 registry analyses, and 3 prospective observational clinical studies. There are three methodology supervisors in this group guiding the students in their research projects: Mahmoud Obeidat, Anett Rancz, and Eszter Szalai. Szilárd Vancsa serves as the main facilitator of the meetings. The team overseeing these projects involves 9 supervisors. The supervisors bring expertise in various fields, such as gastroenterology, pancreatology, surgery, and radiology.

## MEMBERS OF THE GROUP

**SZILÁRD VÁNCSA**  
Group Leader

**MAHMOUD OBEIDAT**  
Scientific Methodology Supervisor

**ANETT RANCZ**  
Scientific Methodology Supervisor

**ESZTER ÁGNES SZALAI**  
Scientific Methodology Supervisor

**DÁNIEL SÁNDOR VERES**  
Statistician

**ÁDÁM ZOLCSÁK**  
Statistician

**STUDENTS:** Maria Bucur, Ioana Creanga-Murariu, Orsolya Eperjesi, Tibor Dániel Fehér, Ágnes Fodor, Luca Havelda, Dalma Köves-Dobszai, Jimin Lee, Veronika Lillik, Jázmin Németh, Ioana-Irina Rezuş, Lőrinc András Ulmann

**SUPERVISORS:** Szabolcs Ábrahám (Supervisor of the month: **January 2024**), Stefania Bunduc, Bálint Eröss (Supervisor of the month: **January 2022**), Péter Hegyi, Rita Nagy (SMS of the month: **July 2023**), Andrea Szentesi (Supervisor of the month: **December 2023**), Ákos Szűcs, Bogdan Ionel Tamba, Brigitta Teutsch (SMS of the month: **August 2023, December 2023**)



## MARIA BUCUR

NATIONAL INSTITUTE OF DIABETES, NUTRITION AND METABOLIC DISEASES "N.C PAULESCU", BUCHAREST, ROMANIA



### AGE

30 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Hegyi, Stefania Bunduc

### E-MAIL

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### TOPIC

Diabetes mellitus across pancreatic diseases

### VISION

Decrease the burden of Diabetes Mellitus.

### MISSION

Improve prognosis of pancreatic disease patients by achieving well-controlled Diabetes Mellitus.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating therapeutic options for preventing/delaying Diabetes Mellitus in prediabetic patients: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the beta cell function failure during acute pancreatitis: registry analysis.



## IOANA CREANGA-MURARIU

"GRIGORE T. POPA" MEDICINE AND PHARMACY UNIVERSITY / REGIONAL INSTITUTE OF ONCOLOGY, IASI



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Hegyi, Stefania Bunduc, Bogdan Ionel Tamba

### E-MAIL

ioana.creanga@d.umfiasi.ro

### TOPIC

Cannabinoids in the landscape of cancer

### VISION

Improved quality of life for cancer patients.

### MISSION

Decreasing disease burden in cancer patients.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the safety and efficacy of cannabinoids in cancer patients: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the antitumor activity of cannabinoids in preclinical models: Systematic Review and Meta-analysis.



## ORSOLYA EPERJESI

DEPARTMENT OF INTERNAL MEDICINE, TOLDY FERENC HOSPITAL



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Hegyi, Stefania Bunduc

### E-MAIL

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### TOPIC

The importance of pancreatic exocrine insufficiency in pancreatic diseases

### VISION

Optimized management of patients with pancreatic exocrine insufficiency

### MISSION

Optimization of pancreatic enzyme replacement therapy management in early post-acute pancreatitis patients.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effects of PERT after Acute Pancreatitis: A Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the predictive risk factors of pancreatic exocrine insufficiency after acute pancreatitis: a systematic review and meta-analysis.



## TIBOR DÁNIEL FEHÉR

INSTITUTE OF PANCREATIC DISEASES, SEMMELWEIS UNIVERSITY



### AGE

32 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Hegyi, Rita Nagy

### E-MAIL

fehertibordaniel@gmail.com

### TOPIC

The Importance of Social Psychoneuroimmunology in Chronic Pancreatitis

### VISION

Patient-care where GI problems will be better prevented, mitigated and cured by a psychosocial medicine.

### MISSION

The development of psychosocial interventions and prevention programs.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the prevalence of anxiety and depression in patients with pancreatitis: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the Risk Factors of Anxiety and Depression in Acute Pancreatitis Patients: A Prospective Observation Study.



## ÁGNES FODOR

DEPARTMENT OF SURGERY, DÉL-BUDAI CENTRAL HOSPITAL  
SZENT IMRE UNIVERSITY TEACHING HOSPITAL



### AGE

35 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Szabolcs Ábrahám

### E-MAIL

drfodoragi@gmail.com

### TOPIC

Investigating the oncological outcomes after colorectal cancer surgery

### VISION

Improve the care and the outcomes for patients after colorectal cancer surgery.

### MISSION

Investigate the impact of anastomotic leakage on oncological outcomes after colorectal cancer surgery.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of anastomotic leakage on oncological outcomes in patients after colorectal cancer surgery: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the Role of Intraoperative Colonoscopy to Detect Anastomotic Leakage in Colorectal Cancer Surgery: A Systematic Review and Meta-analysis.



## LUCA HAVELDA

INSTITUTE OF PANCREATIC DISEASES, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

dietitian

### SUPERVISOR(S)

Péter Hegyi, Andrea Szentesi

### E-MAIL

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### TOPIC

The impact of triglyceride level on the risk and outcome of different diseases

### VISION

Contribute to the prevention of all preventable diabetes.

### MISSION

Provide evidence-based and valuable data to help prevent diabetes.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effects of different triglyceride levels on the development of diabetes mellitus: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the effects of different triglyceride levels on the outcome of COVID-19: Registry analysis.



## DALMA KÖVES-DOBSZAI

INSTITUTE FOR TRANSLATIONAL MEDICINE, UNIVERSITY OF PÉCS



### AGE

28 years

### EDUCATION

healthcare manager

### SUPERVISOR(S)

Péter Hegyi, Andrea Szentesi

### E-MAIL

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### TOPIC

The effect of obesity on the progression and outcome of acute inflammatory diseases

### VISION

Aiding physicians in risk assessment and decision making about obese patients.

### MISSION

Comprehensively address all factors related to obesity for deeper understanding the way they interact with each other.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of metabolic syndrome factors on the outcome of acute pancreatitis: Systematic Review and Meta-Analysis

#### PROJECT 2:

Investigating the effects of metabolic syndrome on the outcome of COVID19: Registry analysis.



## JIMIN LEE

INSTITUTE OF PANCREATIC DISEASES, SEMMELWEIS UNIVERSITY



### AGE

24 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Hegyi, Stefania Bunduc

### E-MAIL

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### TOPIC

The association of acute pancreatitis with cancer

### VISION

Improve the prognosis of pancreatic cancer.

### MISSION

Prevent the progression of pancreatic cancer into its later stages by determining its early predictors.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Effect of Acute Pancreatitis to the Development of Pancreatic Cancer: Systematic Review and Meta-analysis.

#### PROJECT 2:

Investigating the Incidence Rate of Malignant Tumors in Patients with Acute Pancreatitis: Registry analysis.



## VERONIKA LILLIK

1ST DIVISION OF INTERNAL MEDICINE, FEJÉR COUNTY SZENT GYÖRGY UNIVERSITY TEACHING HOSPITAL



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Hegyi, Rita Nagy

### E-MAIL

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### TOPIC

Investigating the cardiac complications associated with acute pancreatitis

### VISION

Decrease the mortality of acute pancreatitis (AP) by foregoing the preventable complications.

### MISSION

Try to conduct a high-quality research to understand the effect of AP on the cardiac status.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the cardiac complications associated with acute pancreatitis: a systematic review and meta-analysis.

#### PROJECT 2:

Protocol development for understanding the cardiac status during and after Acute Pancreatitis: Prospective observational clinical research.



## JÁZMIN NÉMETH

INSTITUTE FOR PANCREATIC DISEASES, SEMMELWEIS UNIVERSITY



### AGE

24 years

### EDUCATION

medical students

### SUPERVISOR(S)

Péter Hegyi, Stefania Bunduc

### E-MAIL

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### TOPIC

Oncocardiology in digestive system cancer

### VISION

The prognosis of patients with pancreatic cancer can be improved by addressing non-cancer-related morbidity.

### MISSION

Provide further evidence-based recommendations on the management of cardiovascular comorbidities, which can help improve patients prognosis.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the prevalence of cardiovascular morbidity in pancreatic cancer: systematic review and meta-analysis.

#### PROJECT 2:

Investigating the prevalence and risk factors of cardiac cachexia in cancer patients: a systematic review and meta-analysis.



## IOANA-IRINA REZUȘ

"SFANTUL SPIRIDON" COUNTY EMERGENCY HOSPITAL



### AGE

26 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Hegyi, Brigitta Teutsch, Bogdan Ionel Tamba

### E-MAIL

ioanairinarezus@yahoo.co.uk

### TOPIC

Management of pancreatic cancer: from diagnosis to end-stage treatment

### VISION

Better management for patients with pancreatic cancer.

### MISSION

Assess new diagnostic and treatment methods and implement them into healthcare.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy and safety of therapeutic procedures for chronic pain in unresectable pancreatic cancer: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the diagnostic accuracy of different imaging techniques in pancreatic cancer staging: a systematic review and meta-analysis.



## LŐRINC ANDRÁS ULMANN

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

26 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Ákos Szűcs

### E-MAIL

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### TOPIC

New Insights in the Prognosis of Pancreatic Ductal Adenocarcinomas

### VISION

Combine research and knowledge in the surgical treatment of pancreatic cancer.

### MISSION

Research how different pancreatic tumor mutations lead to different prognoses.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the prognostic relevance of micro-RNA analysis in pancreatic tumors: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the Effect of Different Neoadjuvant Therapies on the Prognosis of Borderline Resectable Pancreatic Ductal Adenocarcinomas: A Systematic Review and Meta-analysis.

GROUP 7

# SPORT & SPACE SCIENCE





# GROUP 7

## SPORT & SPACE SCIENCE

### INTRODUCTION TO THE GROUP

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The sport and space science group consists of three students and three outstanding supervisors: Péter Ferdinandy, Renáta Papp, and Nóra Sydó. They are further aided by a group of project students and international team members. The six ongoing projects are all systematic reviews and meta-analyses and deal with the prevention of microgravity-induced disorders, space pharmacology and the impact of exercise on healthy individuals. The team is supported by their SMS, Marie Anne Engh.

### MEMBERS OF THE GROUP

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**PÉTER FERDINANDY**  
*Group Leader*



**MARIE ANNE ENGH**  
*Scientific Methodology  
Supervisor*



**ÁDÁM ZOLCSÁK**  
*Statistician*



**DÁNIEL SÁNDOR VERES**  
*Statistician*

**STUDENTS:** Viktória Barna, Amir Makolli, Zsuzsanna Pásztorné Benyó

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**SUPERVISORS:** Péter Ferdinandy, Renáta Papp, Nóra Sydó



## VIKTÓRIA BARNA

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

46 years

### EDUCATION

dietitian

### SUPERVISOR(S)

Péter Ferdinandy, Nóra Sydó, Renáta Papp

### E-MAIL

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### TOPIC

Sport-specific biomarkers of endurance and strength sports

### VISION

Empower athletes to achieve peak performance and optimal health.

### MISSION

Translate science into practical, actionable recommendations for athletes, coaches, and sports professionals.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of regular training on changes of bone-related biomarkers in healthy population - Systematic Review and Meta-Analysis

#### PROJECT 2:

Investigating the effect of acute training on micronutrient levels in healthy population - Systematic Review and Meta-Analysis



## AMIR MAKOLLI

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

24 years

### EDUCATION

pharmacist

### SUPERVISOR(S)

Péter Ferdinandy, Renáta Papp

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### TOPIC

New insights on pharmacokinetic and pharmacodynamic changes of drugs in varied gravitational environments.

### VISION

Enhancing drug effectiveness in space.

### MISSION

Conducting innovative research to optimize drug utilization in space travel.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of different gravity levels on pharmacokinetics and pharmacodynamics of drugs: a systematic review and meta-analysis.

#### PROJECT 2:

Investigating the effect of different gravity levels on pharmacokinetics and pharmacodynamics of drugs in animal models: a systematic review and meta-analysis



## ZSUZSANNA PÁSZTORNÉ BENYÓ

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

48 years

### EDUCATION

economist

### SUPERVISOR(S)

Nóra Sydó, Renáta Papp

### E-MAIL

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### TOPIC

Human adaptation to spaceflight

### VISION

Achieve healthy longevity in space and on Earth.

### MISSION

Hungarian TRISH = Translational Research Institute for Space Health

### SPECIFIC GOALS

#### PROJECT 1:

Assessing the effectiveness of bisphosphonates in preventing altered gravity-related bone loss and renal stone formation: a systematic review and meta-analysis

#### PROJECT 2:

Investigating how spaceflight or altered gravity levels affect body composition at different time points: a systematic review and meta-analysis



# YEAR III-IV

STARTED IN  
SEPTEMBER 2021 & 2022

# YEAR III & IV

## ALL YOU NEED TO KNOW ABOUT IT

Besides the Year II description, Year III and IV students should follow the below description.

Years III and IV are the second phases of the PhD training. Those who successfully completed the Progress Report VI (Complex Exam) can continue the TM PhD training. Based on the minimum requirement of the previous Progress Reports, all students must have at least a submitted manuscript. However, for most of the students, the second project should also be in an advanced phase.

Students are divided into different progress groups. Those in the Graduate group can start writing their thesis. Those in the Completed group can either start working on further projects or start writing their thesis until both papers are officially accepted.

The thesis defense has two phases, according to the following figure.



- home PhD defence (local institution)
- central PhD defence (CTM)

GROUP 1  
**DENTISTRY**





# GROUP 1 DENTISTRY



## INTRODUCTION TO THE GROUP

The Dentistry research group includes 11 third-year and 10 fourth-year students, guided by 6 Scientific Methodology Supervisors and supported by 21 clinical supervisors. This group focuses on a diverse set of research areas, including maxillofacial surgery, prosthodontics, community and conservative dentistry, implantology, orthodontics, periodontology, teledentistry, cranio maxillofacial surgery, TMJ, facial malformation, and digital dentistry. Most students are engaged in meta-analyses, while others work on registry analysis and clinical trial protocols, contributing significant insights to their respective fields. This multidisciplinary structure provides a platform for in-depth exploration and collaboration across dental specialties, enhancing research that aims to improve dental practices and patient care.

## MEMBERS OF THE GROUP



**GÁBOR VARGA**  
Group Leader



**GÁBOR GERBER**  
Group Leader



**MARIE ANNE ENGH**  
Scientific Methodology  
Supervisor



**BIANCA GOLZIO**  
Scientific Methodology  
Supervisor



**KATA KELEMEN**  
Scientific Methodology  
Supervisor



**BRIGITTA TEUTSCH**  
Scientific Methodology  
Supervisor



**ALEXANDER S. WENNING**  
Scientific Methodology  
Supervisor



**SZILÁRD VÁNCSA**  
Scientific Methodology  
Supervisor

### STUDENTS:

**Year III:** Márton Ács, Madalina Banarescu, Bencze Bulcsú, Eszter Hardi, Péter Gergely Komora, Xinyi Qian, Virág Róna, Dalma Tábi, Anna Takács, Orsolya Vámos, Boldizsár Vánkos / **Year IV:** Zsuzsanna Domokos, Bianca Golzio Navarro Cavalvante, Kata Kelemen, János König, Anna Németh, Alexander Schulze Wenning, Eleonóra Sólyom, Eszter Ágnes Szalai, Péter Tajti, Eszter Uhrin, Vikória Vitai

**SUPERVISORS:** Gábor Gerber, Judit Borbély (Supervisor of the month: **April 2023**), Réka Fazekas, Zoltán Géczi, Péter Hermann, Árpád Joób-Fancsaly, Beáta Kerémi (Supervisor of the month: **January 2023**), Barbara Kispélyi (Supervisor of the month: **April 2024**), Márton Kivovics (Supervisor of the month: **December 2023**), Krisztina Ágnes Mikulás (Supervisor of the month: **June 2023, September 2023**), Bálint Molnár, Orsolya Németh (Supervisor of the month: **March 2023**), Gábor Varga, János Vág, Dániel Végh

**AGE**

27 years

**EDUCATION**

dentist

**SUPERVISOR(S)**

Gábor Varga, Gábor Gerber

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**MÁRTON ÁCS**

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY

**TOPIC**

Dentistry - Facial malformation

**VISION**

To decrease the incidence of orofacial clefts and improve the patients quality of life.

**MISSION**

To indicate which maternal risk factors play a role in orofacial clefts incidence through newest scientific data.

**PUBLISHED ARTICLE(S)****PROJECT 1:** Ács, M. et al. (2024) Maternal factors increase risk of orofacial cleft: a meta-analysis. *Sci Rep*, **D1**, IF: **4.600****SPECIFIC GOALS****PROJECT 1:**

Investigating the effects of deleterious habits and maternal health disorders on the risk of orofacial cleft development: systematic review and meta-analysis

**PROJECT 2:**

Investigating the effects of pharmaceutical therapies during pregnancy on the risk of orofacial cleft development: systematic review and meta-analysis

**AGE**

28 years

**EDUCATION**

dentist

**SUPERVISOR(S)**

Gábor Gerber

**E-MAIL**

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**MADALINA BANARESCU**

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY

**TOPIC**

Dentistry - Cranio maxillofacial surgery

**VISION**

To improve the life quality of patients with oro-maxillofacial defects.

**MISSION**

To improve the esthetic and functional outcomes in reconstruction techniques by applying up to date scientific results.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the effectiveness of Intraoperative surgical navigation over conventional surgery in the management of zygomaticomaxillary complex fractures : a systematic review and meta-analysis

**PROJECT 2:**

Investigating the effectiveness of Intraoperative surgical navigation over conventional surgery in the management of orbital reconstruction: a systematic review and meta-analysis

**AGE**

28 years

**EDUCATION**

dentist

**SUPERVISOR(S)**

Dániel Végh

**E-MAIL**

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**BULCSÚ BENCZE**

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY

**TOPIC**

Dentistry - Implantology

**VISION**

To improve the life quality of patients with oro-maxillofacial defects.

**MISSION**

To improve the esthetic and functional outcomes in reconstruction techniques by applying up to date scientific results.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the effects of different HbA1c levels on the severity of dental implant complications: a systematic review and meta-analysis

**PROJECT 2:**

Investigating the effect of Diabetes Mellitus on the prevalence, risk and mortality of Oral Squamous Cell Carcinoma: a systematic review and meta-analysis

**PUBLISHED ARTICLE(S)****PROJECT 1:** Bencze, B. et al. (2024) Prediabetes and poorly controlled type-2 diabetes as risk indicators for peri-implant diseases: A systematic review and meta-analysis. *J Dent*, **D1**, IF: **4.400**

**AGE**

26 years

**EDUCATION**

dentist

**SUPERVISOR(S)**

Árpád Joob-Fancsaly

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**ESZTER HARDI**

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY

**TOPIC**

Dentistry - Oral surgery

**VISION**

To improve the life quality of patients undergoing oral surgeries.

**MISSION**

To find the best solution that alleviates patients' complaints after third molar removal

**SPECIFIC GOALS****PROJECT 1:**

Investigating the effect of perineural twin mix injection in reducing postoperative complications in lower third molar removal A systematic review and meta-analysis

**PROJECT 2:**

Effect of kinesio tape as adjunct therapy in reducing postoperative complications in third molar removal Randomized controlled trial

**AGE**

43 years

**EDUCATION**

dentist

**SUPERVISOR(S)**

János Vág

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**PÉTER GERGELY KOMORA**

DEPARTMENT OF RESTORATIVE DENTISTRY AND ENDODONTICS, SEMMELWEIS UNIVERSITY

**TOPIC**

Dentistry - Conservative dentistry

**VISION**

Minimal invasive endodontics.

**MISSION**

Reduce the invasiveness in endodontics through evidence-based science.

**SPECIFIC GOALS****PROJECT 1:**

Comparing the efficacy of bioactive materials in vital pulp therapy: a systematic-review and network meta-analysis

**PROJECT 2:**

Comparing the root canal filling quality of calcium silicate-based sealers: a systematic-review and meta-analysis of in-vitro studies

**PUBLISHED ARTICLE(S)****PROJECT 1:** Komora, PG. et al. (2024) Comparison of bioactive material failure rates in vital pulp treatment of permanent matured teeth - a systematic review and network meta-analysis. *Sci Rep*, **D1**, IF: **4.600****AGE**

26 years

**EDUCATION**

dentist

**SUPERVISOR(S)**

Krisztina Ágnes Mikulás

**E-MAIL**

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**XINYI QIAN**

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY

**TOPIC**

Cardiology - Coronary heart disease

**VISION**

To improve patient care in Hungary and worldwide through evidence-based innovative healthcare solutions

**MISSION**

To provide forward-looking and novel scientific results in coronary artery and vascular treatment

**SPECIFIC GOALS****PROJECT 1:**

Hard and soft tissue outcomes of different placement and loading protocols on single maxillary implants in the esthetic zone: a systematic review and network meta-analysis

**PROJECT 2:**

Peri-implant hard and soft tissue outcomes with anatomic vs non-anatomic healing abutment: a systematic review and meta-analysis

**PUBLISHED ARTICLE(S)****PROJECT 1:** Qian, X. et al. (2024) Comparison of implant placement and loading protocols for single anterior maxillary implants: A systematic review and network meta-analysis. *J Prosteth Dent*, **D1**, IF: **4.600**



## VIRÁG RÓNA

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

dentist

### SUPERVISOR(S)

Zoltán Géczi

### E-MAIL

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### TOPIC

Dentistry - Prosthodontics

### VISION

Researching the usage of polymers in dentistry mainly focusing on chitosan.

### MISSION

Finding some new alternatives that can be used in clinical dentistry.

### SPECIFIC GOALS

#### PROJECT 1:

Effect of chitosan on the number of Streptococcus mutans in saliva: meta-analysis and systematic review

#### PROJECT 2:

Effect of chitosan on the number of Enterococcus faecalis in root canal: meta-analysis and systematic review

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Róna, V. et al. (2023) Effect of Chitosan on the Number of Streptococcus mutans in Saliva: A Meta-Analysis and Systematic Review. *Int J Mol Sci*, **D1**, IF: **5.600**



## DALMA TÁBI

DEPARTMENT OF COMMUNITY DENTISTRY, SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

dentist

### SUPERVISOR(S)

Orsolya Németh

### E-MAIL

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### TOPIC

Dentistry - Orthodontics

### VISION

Most of the children with disabilities can attend to a specialized preventive educational program, their oral-hygiene indices are the same as their healthy peers and they can receive high-quality treatment if needed.

### MISSION

To provide a health care program to patients with special needs -especially children with disability and to develop a method where the children's cooperation and oral literacy can be improved.

### SPECIFIC GOALS

#### PROJECT 1:

Assessing the effectiveness of dental prevention programs among children- systematic review and meta-analysis

#### PROJECT 2:

School-based prevention program for special needs children –Pilot study for an RCT



## ANNA TAKÁCS

DEPARTMENT OF COMMUNITY DENTISTRY, SEMMELWEIS UNIVERSITY



### AGE

26 years

### EDUCATION

dentist

### SUPERVISOR(S)

Márton Kívovics

### E-MAIL

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### TOPIC

Dentistry - Community dentistry

### VISION

The application of Augmented Reality based dynamic Computer Assisted Implant Surgery (CAIS) in the everyday clinical practice.

### MISSION

Improving patient satisfaction with implants.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the accuracy of different implant placement techniques: a systematic review and meta-analysis

#### PROJECT 2:

MSc students' learning curve of AR based and conventional dynamic navigation implant placement: protocol of an in vitro study

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Takács, A. et al. (2023) Advancing Accuracy in Guided Implant Placement: A Comprehensive Meta-Analysis: Meta-Analysis evaluation of the accuracy of available. implant placement Methods. *J Dent*, **D1**, IF: **4.400**



## ORSOLYA VÁMOS

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

dentist

### SUPERVISOR(S)

Barbara Kispélyi

### E-MAIL

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### TOPIC

Dentistry - Prosthodontics

### VISION

To spread awareness of the harmful effect of tobacco products, promote prevention and cessation.

### MISSION

To make comparison on the effects of traditional and alternative tobacco products.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Vámos, O. et al. (2024) The effect of nicotine-containing products on peri-implant tissues: A systematic review and network meta-analysis. *Nicotine Tob Res*, **D1**, IF: **4.700**

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of tobacco products on peri-implant tissues: a systematic review and meta-analysis

#### PROJECT 2:

Impact of smoking status and electronic cigarette use on non-surgical periodontal therapy: a systematic review and meta-analysis



## BOLDIZSÁR VÁNKÖS

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

dentist

### SUPERVISOR(S)

Barbara Kispélyi

### E-MAIL

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### TOPIC

Dentistry - Implantology

### VISION

Modern, simple, accurate and patient-friendly workflow in implant prosthodontics.

### MISSION

To investigate the accuracy and efficacy of novel technologies in implant prosthodontics.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Vámos, O. et al. (2024) Accuracy of conventional versus additive cast-fabrication in implant prosthodontics: A systematic review and meta-analysis of in vitro studies. *J Prosthodont Res*, **D1**, IF: **3.200**

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the accuracy of additive versus conventional cast-fabrication in implant prosthodontics: A systematic review and meta-analysis

#### PROJECT 2:

Comparing the accuracy of conventional versus different digital implant impression techniques: A systematic review and meta-analysis



## ZSUZSANNA DOMOKOS

DEPARTMENT OF COMMUNITY DENTISTRY, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

dentist

### SUPERVISOR(S)

Orsolya Németh

### E-MAIL

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### TOPIC

Dentistry - Periodontology

### VISION

Develop interdisciplinary knowledge by investigating the association between dental diseases and systematic diseases and improving the treatment involving dentists and medical doctors.

### MISSION

Incorporate a multidisciplinary attitude into clinical practice based on a comprehensive knowledge.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Domokos, Zs. et al. (2022) Patients with inflammatory bowel disease have a higher chance of developing periodontitis: A systematic review and meta-analysis. *Cancer Immunol Immunother*, **Q1**, IF: **5.800**  
Domokos, Zs. et al. (2024) Evaluating salivary MMP-8 as a biomarker for periodontal diseases: A systematic review and meta-analysis. *Heliyon*, **Q1**, IF: **4.000**

### SPECIFIC GOALS

#### PROJECT 1:

Investigation of the association between different multifactorial diseases: periodontal disease and inflammatory bowel diseases  
Systematic review and meta-analysis

#### PROJECT 2:

Association between matrix metalloproteinase-8 and clinical parameters in periodontitis  
Systematic review and meta-analysis



## BIANCA GOLZIO NAVARRO CAVALCANTE

DEPARTMENT OF ORAL BIOLOGY, SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

dentist

### SUPERVISOR(S)

Gábor Varga

### E-MAIL

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### TOPIC

Dentistry - Conservative dentistry

### VISION

To translate clinical problems into high-level science.

### MISSION

To bring to clinical practice the possibilities of non-invasive approaches for dental enamel related problems.

### SPECIFIC GOALS

#### PROJECT 1:

Efficacy of CPP-ACP on remineralization of white spot lesions compared to fluoride therapies alone: a systematic review and meta-analysis

#### PROJECT 2:

Strategies for the management of hypersensitivity and remineralization of teeth affected by Molar-Incisor Hypomineralization (MIH): a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Golzio N C, B. et al. (2024) Combined Casein Phosphopeptide-Amorphous Calcium Phosphate and Fluoride Is Not Superior to Fluoride Alone in Early Carious Lesions: A Meta-Analysis. *Caries Res*, **D1**, IF: **4.200**



## KATA KELEMEN

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

dentist

### SUPERVISOR(S)

Péter Hermann

### E-MAIL

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### TOPIC

Dentistry - TMJ

### VISION

To establish a TMD treatment protocol, that is available for all patients apart from the localisation of the dental offices.

### MISSION

To make an emphasis on prevention and therapy by a multidisciplinary team and also to have proper funding to increase the level of evidence.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the conservative therapeutic possibilities for myogenic temporomandibular disorders

#### PROJECT 2:

Investigating the conservative therapeutic possibilities for arthrogenic temporomandibular disorders

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Kelemen, K. et al. (2023) Additional splint therapy has no superiority in myogenic temporomandibular disorders: A systematic review and meta-analysis of randomized controlled trials. *Journal of Prosthodontic Research*, **D1**, IF: **4.338**



## JÁNOS KÖNIG

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

31 years

### EDUCATION

dentist

### SUPERVISOR(S)

Péter Hermann

### E-MAIL

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### TOPIC

Dentistry - Maxillofacial prosthodontics

### VISION

An evidence-based Maxillofacial Prosthodontics.

### MISSION

To establish proper scientific output.

### SPECIFIC GOALS

#### PROJECT 1:

Optical scanning should be the new standard in facial prosthetics: a systematic review and meta-analysis

#### PROJECT 2:

Rehabilitation of maxillectomy is based on controversial evidence: a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** König, J. et al. (2023) Current status of optical scanning in facial prosthetics: A systematic review and meta-analysis. *J Prosthet Dent*, **D1**, IF: **4.338**

**PROJECT 2:** König, J et al. (2023) Comparative analysis of surgical and prosthetic rehabilitation in maxillectomy: A systematic review and meta-analysis on quality-of-life scores and objective speech and masticatory measurements. *J Prosthet Dent*, **D1**, IF: **4.600**



## ANNA NÉMETH

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

dentist

### SUPERVISOR(S)

Judit Borbély

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### TOPIC

Dentistry - Prosthodontics

### VISION

High quality digital prosthodontic treatment using 3D printing technology as a routine.

### MISSION

3D printing to clinical practice.

### SPECIFIC GOALS

#### PROJECT 1:

Clear guidance to select the most accurate technology for 3D printing dental models: a network meta-analysis

#### PROJECT 2:

Comparative study of additive and subtractive manufacturing of fixed dental restorations: a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Németh, A. et al. (2023) Clear guidance to select the most accurate technologies for 3D printing dental models – A network meta-analysis. *J Dent*, **D1**, IF: **4.000**

**PROJECT 2:** Németh, A. et al. (2024) Comparison of fit and trueness of single-unit and short-span fixed dental restorations fabricated by additive and subtractive manufacturing - A systematic review and meta-analysis. *J Dent*, **D1**, IF: **4.800**



## ALEXANDER SCHULZE WENNING

DEPARTMENT OF ORAL BIOLOGY, SEMMELWEIS UNIVERSITY



### AGE

31 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Gábor Varga, Gábor Gerber

### E-MAIL

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### TOPIC

Dentistry - Maxillofacial surgery

### VISION

No cleft baby left untreated.

### MISSION

To reduce invasiveness through research based clinical decision making. Spreading awareness.

### SPECIFIC GOALS

#### PROJECT 1:

One-stage or two-stage palatoplasty, analyzing maxillofacial growth in patients with uni- and bilateral cleft lip and palate: Systematic review and meta-analysis

#### PROJECT 2:

Determining the optimal timing for palatoplasty, analyzing maxillofacial growth in patients with uni- and bilateral cleft lip and palate: Systematic review and meta-analysis



## ELEONÓRA SÓLYOM

DEPARTMENT OF CONSERVATIVE DENTISTRY, SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

dentist

### SUPERVISOR(S)

Réka Fazekas, Bálint Molnár

### E-MAIL

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### TOPIC

Dentistry - Periodontology

### VISION

To change the mindset of tooth extraction.

### MISSION

None of the extraction sockets should be left unpreserved.

### SPECIFIC GOALS

#### PROJECT 1:

Safety and Efficacy of Autogenous Tooth Bone graft for Alveolar Ridge Preservation: a systematic review and meta-analysis

#### PROJECT 2:

Clinical, radiographical, histological evaluation and blood flow analysis of hard- and soft-tissue changes following alveolar ridge preservation : protocol of a randomized clinical trial

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Sólyom, E. et al. (2023) The use of autogenous tooth bone graft is an efficient method of alveolar ridge preservation – meta-analysis and systematic review. *BMC Oral Health*, **Q1**, IF: **2.900**

**AGE**

39 years

**EDUCATION**

dentist

**SUPERVISOR(S)**

Beáta Kerémi

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## ESZTER ÁGNES SZALAI

DEPARTMENT OF CONSERVATIVE DENTISTRY,  
SEMMELWEIS UNIVERSITY

**TOPIC**

Dentistry - Halitosis

**VISION**

To find the best solution for diagnostic and managing halitosis.

**MISSION**

To contribute to oral health and well-being by providing the best care.

**SPECIFIC GOALS****PROJECT 1:**

Daily use of chlorine dioxide effectively treats halitosis: a systematic review and meta-analysis

**PROJECT 2:**

Organoleptic and halitometric assessments do not correlate well in intra-oral halitosis: a systematic review and meta-analysis

**PUBLISHED ARTICLE(S)**

**PROJECT 1:** Szalai, EÁ. et al. (2023) Daily use of chlorine dioxide effectively treats halitosis: A meta-analysis of randomised controlled trials. *PLoS ONE*, **Q1**, IF: **3.700**

**PROJECT 2:** Szalai, EÁ. et al. (2023) Organoleptic and Halitometric Assessments Do Not Correlate Well in Intra-oral Halitosis: a Systematic Review and Meta-analysis. *J Evid Based Dent Pract*, **Q1**, IF: **3.600**

**AGE**

29 years

**EDUCATION**

dentist

**SUPERVISOR(S)**

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## PÉTER TAJTI

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY

**TOPIC**

Dentistry - Implantology

**VISION**

To provide the best treatment for my patients in implant rehabilitation.

**MISSION**

Implementing the fully digital workflow in every aspect of implant rehabilitation.

**SPECIFIC GOALS****PROJECT 1:**

Clinical outcomes of monolithic zirconia and metal-ceramic implant-supported single restorations

**PROJECT 2:**

The influence of abutment height on crestal bone stability and peri-implant soft tissue

**PUBLISHED ARTICLE(S)**

**PROJECT 1:** Tajti, P. et al. (2023) Monolithic zirconia as a valid alternative to metal-ceramic for implant-supported single crowns in the posterior region: A systematic review and meta-analysis of randomized controlled trials. *J Prosthet Dent*, **Q1**, IF: **4.148**

**PROJECT 2:** Tajti, P. et al. (2023) Less marginal bone loss around bone-level implants restored with long abutments: A systematic review and meta-analysis. *Periodontol 2000*, **Q1**, IF: **18.600**

**AGE**

29 years

**EDUCATION**

dentist

**SUPERVISOR(S)**

Orsolya Németh

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## ESZTER UHRIN

DEPARTMENT OF COMMUNITY DENTISTRY, SEMMELWEIS UNIVERSITY

**TOPIC**

Dentistry - Teledentistry

**VISION**

A teledentistry application.

**MISSION**

Using teledentistry in the diagnosis of oral lesions in primary dental care.

**SPECIFIC GOALS****PROJECT 1:**

Teledentistry: A Future Solution In The Diagnosis Of Oral Lesions: A Diagnostic Meta-analysis And Systematic Review

**PROJECT 2:**

The Effect Of Oral Healthcare Prevention Program For Post-stroke Inpatients' Oral Hygiene: A Systematic Review And Meta-analysis

**PUBLISHED ARTICLE(S)**

**PROJECT 1:** Uhrin, E. et al. (2023) Teledentistry: A Future Solution in the Diagnosis of Oral Lesions: Diagnostic Meta-Analysis and Systematic Review. *Telemedicine and e-Health*, **Q1**, IF: **4.700**

**AGE**

31 years

**EDUCATION**

dentist

**SUPERVISOR(S)**

Judit Borbély

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semmelweis-univ.hu

## VIKTÓRIA VITAI

DEPARTMENT OF PROSTHODONTICS, SEMMELWEIS UNIVERSITY

**TOPIC**

Dentistry - Digital dentistry

**VISION**

High-end digital Prosthodontics available for all patients.

**MISSION**

Intraoral scanning systems to prosthodontic workflow.

**SPECIFIC GOALS****PROJECT 1:**

Evaluation of the accuracy of intraoral scanners for complete-arch scanning: a systematic review and meta-analysis

**PROJECT 2:**

Comparison of Tooth Shade selection with Intraoral Scanners to Spectrophotometers: a systematic review and meta-analysis

**PUBLISHED ARTICLE(S)**

**PROJECT 1:** Vitai, V. et al. (2023) Evaluation of the accuracy of intraoral scanners for complete-arch scanning: A systematic review and network meta-analysis. *J Dent*, **D1**, IF: **4.400**

**PROJECT 2:** Vitai, V. et al. (2024) Color Comparison Between Intraoral Scanner and Spectrophotometer Shade Matching: A Systematic Review and Meta-Analysis. *J Esthet Restor Dent*, **D1**, IF: **3.200**

GROUP 2

# CRITICAL CARE & CARDIOLOGY





# GROUP 2

## CRITICAL CARE & CARDIOLOGY

### INTRODUCTION TO THE GROUP

The Critical Care group mainly focuses on anesthesiology, intensive care, emergency medicine, and the physiological/psychological parameters used for the assessment and treatment of these patients. The group is led by the director and vice-director of the Semmelweis University's Department of Anesthesiology and Intensive Therapy, Zsolt Molnár and László Zubek respectively, both long-time collaborators with the CTM.

There are nine students, including two MD-PhD students, from a wide range of clinical expertise. Supervisors and experts of this group include Szabolcs Kéri, the rector of Tokaj-Hegyalja University; Ákos Csomós, the director of the Anesthesiology and Intensive Therapy Unit of the Hospital of the Hungarian Defense Forces; and Endre Zima, the director of the Anesthesiology and Perioperative Patient Care Department of Semmelweis University. The group is supported by two SMS's, Dávid Laczkó and Caner Turan, and biostatistician Szilvia Kiss-Dala.

### MEMBERS OF THE GROUP



**ZSOLT MOLNÁR**  
*Group Leader*



**MARIE ANNE ENGH**  
*Scientific Methodology Supervisor*



**RITA NAGY**  
*Scientific Methodology Supervisor*



**CANER TURAN**  
*Scientific Methodology Supervisor*

#### STUDENTS:

Year III: Réka Ehrenberger, Dilan Márk Karim, Nikolett Kiss, Richárd Masszi, Márton Papp  
Year IV: Boldizsár Kiss, Emőke Henrietta Kovács, Péter Márton Kulyassa, Anna Réka Sebestyén, Gergő Vilmos Szabó, Csenge Erzsébet Szigetváry, Boglárka Veres

**SUPERVISORS:** István Ferenc Édes, Annamária Kosztin, Krisztina Madách, Béla Merkely, Zsolt Molnár, Máté Rottler, Zoltán Ruszkai, Krisztián Tánczos, Domonkos Trásy, Marcell Virág, Endre Zima (Supervisor of the month: April 2022), László Zubek

**AGE**

26 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

István Ferenc Édes

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**RÉKA EHRENBEGER**

HEART AND VASCULAR CENTRE, SEMMELWEIS UNIVERSITY

**TOPIC**

Cardiology - Coronary heart disease

**VISION**

To improve patient care in Hungary and worldwide through evidence-based innovative healthcare solutions

**MISSION**

To provide forward-looking and novel scientific results in coronary artery and vascular treatment

**SPECIFIC GOALS****PROJECT 1:**

Investigating the effectiveness of treatment modalities for calcified coronary lesions: a systematic review and meta-analysis.

**PROJECT 2:**

Comparison of compression and non-compression based hemostasis devices in case of brachial arterial puncture: protocol of a multicentre randomized trial

**PUBLISHED ARTICLE(S)****PROJECT 1:** Ehrenberger, E. et al. (2024) Modified Balloon Use After Rotational Atherectomy Reduces Major Adverse Cardiovascular Event Rates in Severely Calcified Coronary Lesions: A Systematic Review and Meta-Analysis. *J Clin Med*, **Q1**, IF: **3.900****AGE**

34 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Krisztina Madách, Zsolt Molnár

**E-MAIL**

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**DILAN MÁRK KARIM**

ANESTHESIOLOGY AND INTENSIVE CARE CLINIC, SEMMELWEIS UNIVERSITY

**TOPIC**

Intensive care - Microbiom

**VISION**

Science may overcome quackery.

**MISSION**

I want to understand better and disseminate the beauty and pitfalls of evidence creation.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the extent of dysbiosis in the critically ill: a systematic review and meta-analysis

**PROJECT 2:**

Exploring the depths: Comparing sample-obtaining methods for lower respiratory microbiome testing: a systematic review and meta-analysis

**AGE**

42 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Zsolt Molnár, László Zubek

**E-MAIL**

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**NIKOLETT KISS**

HEART AND VASCULAR CENTRE, SEMMELWEIS UNIVERSITY

**TOPIC**

Intensive care - Cardiac surgery

**VISION**

For science to prevail over routine.

**MISSION**

To implement standardised perioperative protocols in cardiovascular anaesthesia to minimize postoperative complications.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the predictive value of urinary biomarkers in cardiac surgery related acute kidney injury: systematic review and meta-analysis

**PROJECT 2:**

Perioperative liraglutide for optimal glucose control in open aortic aneurysm repair Protocol of a randomised clinical trial



## RICHÁRD MASSZI

HEART AND VASCULAR CENTRE, SEMMELWEIS UNIVERSITY



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Annamária Kosztin, Béla Merkely

### E-MAIL

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### TOPIC

Cardiology - Health failure

### VISION

To discover every single detail that can influence the outcome of a disease.

### MISSION

Finding more personalised treatment for heart failure patients.

### SPECIFIC GOALS

#### PROJECT 1:

Predictive value of scar burden assessed by MRI on sudden cardiac death in cardiac resynchronization therapy patients: a systematic review and meta-analysis

#### PROJECT 2:

Effectiveness of non-furosemide drugs with diuretic effect in the management of acute heart failure: a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Masszi, R. et al. (2024) Evaluating the predictive value of late gadolinium enhancement assessed by cardiac magnetic resonance on sudden cardiac death in patients selected for implantable cardioverter defibrillator and cardiac resynchronization therapy implantation: a systematic review and meta-analysis. *Clin Res Cardiol*, **D1**, IF: **5.000**



## MÁRTON PAPP

NEW SZENT JÁNOS HOSPITAL AND CLINIC



### AGE

37 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zsolt Molnár, Domonkos Trásy

### E-MAIL

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### TOPIC

Intensive care - Sepsis

### VISION

Unnecessary and inappropriate antibiotic therapy will be a bad practice from the past.

### MISSION

Protocolize and individualize procalcitonin use in the ICU.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effects of procalcitonin-guided antibiotic therapy versus standard treatment in ICU patients: a systematic review and meta-analysis of randomized controlled trials

#### PROJECT 2:

Using PCT kinetics to guide antibiotic therapy of ICU patients with suspected new-onset infection: protocol of a multicentre randomized trial

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Papp, M. et al. (2023) Procalcitonin-guided antibiotic therapy may shorten length of treatment and may improve survival-a systematic review and meta-analysis. *Crit Care*, **D1**, IF: **15.100**

**PROJECT 2:** Papp, M. et al. (2024) Endothelial Protection and Improved Micro- and Macrocirculation with Hemoadsorption in Critically Ill Patients. *J Clin Med*, **Q1**, IF: **3.000**



## BOLDIZSÁR KISS

HEART AND VASCULAR CENTRE, SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Endre Zima

### E-MAIL

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### TOPIC

Cardiology - Resuscitation

### VISION

The best medical knowledge and practice needs a constant update by scientific research.

### MISSION

Develop and refine intensive care strategies for resuscitated patients.

### SPECIFIC GOALS

#### PROJECT 1:

Investigation of prediction scores in out-of-hospital cardiac arrest: a systematic review and meta-analysis

#### PROJECT 2:

Prophylactic versus clinically-driven antibiotics after successful resuscitation: a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Kiss B. et al. (2024) Prediction performance of scoring systems after out-of-hospital cardiac arrest: A systematic review and meta-analysis. *PLoS One*, **Q1**, IF: **3.700**



## EMŐKE HENRIETTA KOVÁCS

DEPARTMENT OF ANESTHESIOLOGY, FUNDENI CLINICAL INSTITUTE



### AGE

30 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zsolt Molnár, Krisztián Táncczos

### E-MAIL

emsikee@gmail.com

### TOPIC

Intensive care - COVID-19

### VISION

To implement new modalities to modify the thromboinflammatory process by further elucidating the underlying mechanisms.

### MISSION

To unveil the details of the crosstalk between the inflammatory response and hemostasis in critically ill patients.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Kovács, EH. et al. (2022) Effectiveness and safety of fibrinolytic therapy in critically ill patients with COVID-19 with ARDS: protocol for a prospective meta-analysis. *BMJ Open*, **Q1**, IF: **2.900**

**PROJECT 2:** Kovács, EH. et al. (2022) Investigating the association between IL-6 antagonist therapy and blood coagulation in critically ill patients with COVID-19: a protocol for a prospective, observational, multicentre study. *BMJ Open*, **Q1**, IF: **2.900**

### SPECIFIC GOALS

#### PROJECT 1:

Higher dose anticoagulation cannot prevent disease progression in COVID-19 patients: A systematic review and meta-analysis

#### PROJECT 2:

Effectiveness and safety of fibrinolytic therapy in critically ill COVID-19 patients with ARDS: systematic review and a prospective meta-analysis



## PÉTER MÁRTON KULYASSA

HEART AND VASCULAR CENTRE, SEMMELWEIS UNIVERSITY



### AGE

31 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

István Ferenc Édes

### E-MAIL

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### TOPIC

Interventional cardiology - Drug-eluting stents

### VISION

To reduce the burden of coronary heart disease with improved coronary interventions.

### MISSION

Decreasing the need of recurrent revascularization and the rate of complications.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Kulyassa, PM. et al. (2023) Drug-coated balloon therapy is more effective in treating late drug-eluting stent in-stent restenosis than the early occurring one — a systematic review and meta-analysis. *Front Cardiovasc Med*, **Q1**, IF: **5.846**

### SPECIFIC GOALS

#### PROJECT 1:

Drug coated balloon effectivity in the treatment of early and late drug eluting stent in-stent restenosis a systematic review and meta-analysis

#### PROJECT 2:

RAPHE: Radial Artery Puncture Hemostasis Evaluation protocol publication of a multicentre randomised controlled trial



## ANNA RÉKA SEBESTYÉN

HEIM PÁL NATIONAL PEDIATRIC INSTITUTE



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zsolt Molnár, Marcell Virág

### E-MAIL

annareka97@gmail.com

### TOPIC

Anesthesiology - Perioperative care

### VISION

Old paradigms in perioperative patient care have to be changed.

### MISSION

To provide high quality of evidence to support all of the above.

### SPECIFIC GOALS

#### PROJECT 1:

The effects of preoperative carbohydrate loading on postoperative outcomes in patients undergoing elective major non-cardiac surgery: a systematic review and meta-analysis

#### PROJECT 2:

Multimodal, individualised, goal-directed fluid therapy (miGDFT) in patients undergoing pancreatic surgery: protocol of a multicentre randomised trial

**AGE**

36 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Zsolt Molnár, Máté Rottler

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## GERGŐ VILMOS SZABÓ

SZENT GYÖRGY HOSPITAL, SZÉKESFEHÉRVÁR

**TOPIC**

Emergency medicine - Transfusiology

**VISION**

Provide the most appropriate care to all the patients treated in the acute phase.

**MISSION**

Demonstrate that scientific methods can be used to improve patient care.

**SPECIFIC GOALS****PROJECT 1:**

Point-of-care ultrasound improves clinical outcomes in patients with acute onset dyspnea: a systematic review and meta-analysis

**PROJECT 2:**

Fluid resuscitation with balanced electrolyte solutions results in faster resolution of diabetic ketoacidosis than with 0.9% saline in adults: a systematic review and meta-analysis

**PUBLISHED ARTICLE(S)****PROJECT 1:** Szabó, GV. et al. (2020) Point-of-care ultrasound improves clinical outcomes in patients with acute onset dyspnea: a systematic review and meta-analysis.*Intern Emerg Med*, **Q2**, IF: **4.600****PROJECT 2:** Szabó, GV. et al. (2024) Fluid resuscitation with balanced electrolyte solutions results in faster resolution of diabetic ketoacidosis than with 0.9% saline in adults - A systematic review and meta-analysis. *Diabetes Metab Res Rev*, **D1**, IF: **8.000****AGE**

29 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Zsolt Molnár, Zoltán Ruszkai

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## CSENGE ERZSÉBET SZIGETVÁRY

ANESTHESIOLOGY AND INTENSIVE CARE CLINIC, SEMMELWEIS UNIVERSITY

**TOPIC**

Anesthesiology - COVID-19

**VISION**

Implementing personalized strategies in intensive care medicine on a board scale, hence providing more effective and safer interventions.

**MISSION**

To help disseminating scientific based medicine in anesthesiology and intensive therapy.

**SPECIFIC GOALS****PROJECT 1:**

Individualized positive end-expiratory pressure settings reduce the incidence of postoperative pulmonary complications: Systematic review and meta-analysis

**PROJECT 2:**

Acute Hypoxaemic Respiratory Failure Registry: Initiation of a registry

**PUBLISHED ARTICLE(S)****PROJECT 1:** Szigetváry, CSE. et al. (2023) Hemoadsorption as Adjuvant Therapy in Acute Respiratory Distress Syndrome (ARDS): A Systematic Review and Meta-Analysis *Biomedicines*, **Q1**, IF: **4.700****PROJECT 2:** Szigetváry, CSE. et al. (2024) Individualised Positive End-Expiratory Pressure Settings Reduce the Incidence of Postoperative Pulmonary Complications: A Systematic Review and Meta-Analysis. *J Clin Med*, **Q1**, IF: **3.900**

04/23

**AGE**

29 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Zsolt Molnár

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## CANER TURAN

SEMMELWEIS UNIVERSITY, ALUMNI DIRECTORATE

**TOPIC**

Anesthesiology - Hepatology

**VISION**

To be one of the first among many „scientist-physicians”.

**MISSION**

To replace ‚tradition’ and ‚habit’ with scientific thinking.

**SPECIFIC GOALS****PROJECT 1:**

The Effect of Preoperative Administration of Glucocorticoids on the Postoperative Complication Rate in Liver Surgery: a systematic review and meta-analysis

**PROJECT 2:**

Hemoadsorption Therapy for Critically Ill Patients with Acute Liver Dysfunction: a systematic review and meta-analysis

**PUBLISHED ARTICLE(S)****PROJECT 1:** Turan, C. et al. (2023) Hemoadsorption Therapy for Critically Ill Patients with Acute Liver Dysfunction: A Meta-Analysis and Systematic Review. *Biomedicines*, **Q1**, IF: **6.100****PROJECT 2:** Turan, C. et al. (2024) The Effect of Preoperative Administration of Glucocorticoids on the Postoperative Complication Rate in Liver Surgery: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *J Clin Med*, **Q1**, IF: **3.900**

**AGE**

28 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Béla Merkely, Annamária Kosztin

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## BOGLÁRKA VERES

HEART AND VASCULAR CENTRE, SEMMELWEIS UNIVERSITY

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**TOPIC**

Interventional cardiology - Cardiac resynchronization

**VISION**

To help heart failure patients receive the most effective, evidence-based therapy.

**MISSION**

To conclude from observations, which we can include in everyday clinical practice.

**SPECIFIC GOALS****PROJECT 1:**

The benefits of adding a defibrillator to cardiac resynchronization therapy: a systematic review and meta-analysis

**PROJECT 2:**

Continuous invasive remote monitoring in patients with heart failure compared to regular in-clinic follow-up: a systematic review and meta-analysis

**PUBLISHED ARTICLE(S)**

**PROJECT 1:** Veres, B. et al. (2023) Time-trend treatment effect of Cardiac Resynchronization Therapy with or without Defibrillator on Mortality - A Systematic Review And Meta-Analysis. *Europace*, **Q1**, IF: **6.100**

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GROUP 3

# GYNECOLOGY & UROLOGY





# GROUP 3 GYNECOLOGY & UROLOGY



## INTRODUCTION TO THE GROUP

The Gynecology-Urology research group consists of 12 third-year and 10 fourth-year students, supported by 5 dedicated Scientific Methodology Supervisors and 22 clinical supervisors. The group's research encompasses a wide range of topics within gynecology, urology, and related fields, such as endometriosis, oncology, infectology, surgery, andrology, nutrition, preterm birth, infertility, reproduction medicine, genetics, and endocrinology. The students engage primarily in meta-analyses, registry analyses, and clinical trial protocols, along with registry establishment and survey studies. This comprehensive setup fosters interdisciplinary collaboration, enabling students to make meaningful contributions to women's health, reproductive medicine, and urology.

## MEMBERS OF THE GROUP



**NÁNDOR ÁCS**  
Group Leader



**PÉTER NYIRÁDY**  
Group Leader



**BIANCA GOLZIO**  
Scientific Methodology  
Supervisor



**SZILÁRD VÁNCSA**  
Scientific Methodology  
Supervisor



**BRIGITTA TEUTSCH**  
Scientific Methodology  
Supervisor



**ISABEL AMORIM**  
Scientific Methodology  
Supervisor



**ANETT RANCZ**  
Scientific Methodology  
Supervisor



### STUDENTS:

**Year III:** Júlia Ács, Ádám Csirzó, Máté Éliás, András Mihály Géczi, András Harajka, Dénes Péter Kovács, Márton Kónya, András Kubik, István Madár, Isabel Pinto Amorim das Virgens, Benjamin Skribek, Rita Vajna, Gábor Vleskó / **Year IV:** 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, Ferenc Bánhid, Pál Ákos Deák, Csaba Demendi, Anikó Gál, Réka Hermanné Juhász (Supervisor of the month: **November 2022**), Eszter Mária Horváth, Zsolt Kopa (Supervisor of the month: **July 2023**), Balázs Lintner, Attila Majoros (Supervisor of the month: **December 2022**), Zsolt Melczer, Levente Sára, Miklós Sipos, Gábor Szabó, Tibor Szarvas (Supervisor of the month: **December 2022, May 2023**), Sándor Valent, Szabolcs Várbíró

**AGE**

27 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Attila Majoros

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**JÚLIA ÁCS**

DEPARTMENT OF UROLOGY, SEMMELWEIS UNIVERSITY

**TOPIC**

Urology - Gynecology

**VISION**

Reduce the complications of the surgical treatments.

**MISSION**

Formulate recommendations for surgical treatment in terms of indications, contraindications, patient selection.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the safety and efficacy of female pelvic organ prolapse surgeries with versus without vaginal implants: a systematic review and meta-analysis

**PROJECT 2:**

Investigating risk factors associated with complications of female vaginal pelvic organ prolapse surgeries: a systematic review and meta-analysis

**PUBLISHED ARTICLE(S)****PROJECT 1:** Ács, J. et al. (2023) Safety and Efficacy of Vaginal Implants in Pelvic Organ Prolapse Surgery: A Meta-analysis of 161 536 Patients. *Eur Urol Focus*, **D1**, IF: **5.400****AGE**

29 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Sándor Valent

**E-MAIL**

adamcsirzo@gmail.com

**ÁDÁM CSIRZÓ**

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, SEMMELWEIS UNIVERSITY

**TOPIC**

Obstetrics, gynecology - Endometriosis

**VISION**

Endometriosis-related pain should be a concept of the past, with one pill a day.

**MISSION**

To find the most effective pain relief therapy for endometriosis.

**SPECIFIC GOALS****PROJECT 1:**

Comparison of robot-assisted versus conventional laparoscopy for the treatment of endometriosis: a systematic review and meta-analysis

**PROJECT 2:**

Investigating the most effective medical treatments for endometriosis-related pain: a systematic review and network meta-analysis

**PUBLISHED ARTICLE(S)****PROJECT 1:** Csirz, Á. et al. (2023) Robot-assisted laparoscopy does not have demonstrable advantages over conventional laparoscopy in endometriosis surgery: A systematic review and meta-analysis. *Surg Endosc*, **Q1**, IF: **3.100****PROJECT 2:** Csirz, Á. et al. (2024) Comparative Analysis of Medical Interventions to Alleviate Endometriosis-Related Pain: A systematic review and network meta-analysis. *J Clin Med*, **Q1**, IF: **3.900****AGE**

30 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Szabolcs Várbíró, Miklós Sipos

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**MÁTÉ ÉLIÁS**

DEPARTMENT OF GYNECOLOGY, SZENT BORBÁLA HOSPITAL

**TOPIC**

Obstetrics, gynecology - Endocrinology

**VISION**

In the future, having a child above 40 years of age won't be a question of luck anymore, but the result of good quality, safe and effective treatment.

**MISSION**

Improving the treatment of infertility with robust scientific evidence.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the effects of platelet-rich plasma (PRP) treatment on fertility for women with diminished ovarian reserve: a systematic review and meta-analysis

**PROJECT 2:**

Effect of intraovarian PRP pretreatment on IVF results in diminished ovarian reserve patients: a randomized control trial

**PUBLISHED ARTICLE(S)****PROJECT 1:** Éliás, M. et al. (2024) Platelet-rich plasma (PRP) treatment of the ovaries significantly improves fertility parameters and reproductive outcomes in diminished ovarian reserve patients: a systematic review and meta-analysis. *J Ovarian Res*, **Q1**, IF: **4.000**



## ANDRÁS MIHÁLY GÉCZI

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Szabolcs Várbíró, Levente Sára

### E-MAIL

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### TOPIC

Obstetrics, gynecology - Plastic surgery

### VISION

To find the best methods, which allow the best functional and aesthetical outcome.

### MISSION

To aim for perfection in aesthetic surgery.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of female genital beautification and rejuvenation on patient reported outcomes.

#### PROJECT 2:

The impact of aesthetic breast surgery on lactation. A systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Géczi AM. et al. (2024) Comprehensive Assessment of Labiaplasty Techniques and Tools, Satisfaction Rates, and Risk Factors: A Systematic Review and Meta-analysis. *J Ovarian Res*, **D1**, IF: **2.900**



## ANDRÁS HARAJKA

MEDICAL STUDENT



### AGE

26 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Nándor Ács

### E-MAIL

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### TOPIC

Obstetrics, gynecology - Oncology

### VISION

Revealing the effect of oral contraceptive use on cancer risk.

### MISSION

Supporting the decision making process of women when choosing contraception method.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of oral contraceptive use on endometrial cancer risk: a systematic review and meta-analysis

#### PROJECT 2:

Investigating the effect of oral contraceptive use on ovarian cancer risk: a systematic review and meta-analysis



## DÉNES PÉTER KOVÁCS

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Ferenc Bánhidly

### E-MAIL

kovacsdenespeter@gmail.com

### TOPIC

Obstetrics, gynecology - Infertility

### VISION

Emphasize the importance of prevention, help improve reproduction rates.

### MISSION

All people should be able to create a healthy family.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of Human Papillomavirus infection on adverse birth outcomes: a systematic review and meta-analysis

#### PROJECT 2:

Investigating the association between lipid profile and various pregnancy complications: a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Kovács, DP. et al. (2024) Association between human papillomavirus and preterm delivery: A systematic review and meta-analysis. *Acta Obstet Gynecol Scand*, **D1**, IF: **4.300**



## MÁRTON KÓNYA

PREVENTREND KFT.



### AGE

50 years

### EDUCATION

biologist

### SUPERVISOR(S)

Anikó Gál

### E-MAIL

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### TOPIC

Obstetrics, gynecology - Genetics

### VISION

Increase the effectiveness of genetic tests.

### MISSION

Help pregnant women find a good decision and experts in genetic consultation.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Accuracy of Non-Invasive Prenatal Testing (NIPT) for Rare Chromosome Abnormalities: a systematic review and meta-analysis

#### PROJECT 2:

Non-Invasive Prenatal Testing - Background of false positive cases: a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Kónya, M. et al. (2024) Genome-Wide, Non-Invasive Prenatal Testing for rare chromosomal abnormalities: A systematic review and meta-analysis of diagnostic test accuracy. *PLoS One*, **Q1**, IF: **3.700**



## ANDRÁS KUBIK

SEMMELWEIS UNIVERSITY



### AGE

37 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Tibor Szarvas

### E-MAIL

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### TOPIC

Urology - Surgery

### VISION

Empowering patients through excellence in the care they receive.

### MISSION

Provide high-quality care for people with urinary bladder cancer.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating MMP-7 as a prognostic biomarker in urothelial carcinoma: combined registry and meta-analysis

#### PROJECT 2:

Comparison of radical and organ-sparing treatment modalities for non-metastatic small cell bladder cancer: systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Kubik, A. et al. (2023) Comprehensive Analysis of the Prognostic Value of Circulating MMP-7 Levels in Urothelial Carcinoma: A Combined Cohort Analysis, Systematic Review, and Meta-Analysis. *Int J Mol Sci*, **Q1**, IF: **6.208**



## ISTVÁN MADÁR

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

33 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Nándor Ács, Gábor Szabó

### E-MAIL

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### TOPIC

Obstetrics, gynecology - Oncology

### VISION

I believe that every endometrial cancer patient's life quality and length can be improved using novel methods.

### MISSION

To improve the management of endometrial cancer patients by applying up to date scientific results.

### SPECIFIC GOALS

#### PROJECT 1:

Transvaginal ultrasound and magnetic resonance imaging in the preoperative stratification of endometrial cancer: a systematic review and meta-analysis

#### PROJECT 2:

Systemic therapy for recurrent or advanced endometrial cancer: a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Madár, I. et al. (2024) Diagnostic Accuracy of Transvaginal Ultrasound and Magnetic Resonance Imaging for the Detection of Myometrial Infiltration in Endometrial Cancer: A Systematic Review and Meta-Analysis. *Cancers (Basel)*, **Q1**, IF: **5.200**



## ISABEL PINTO AMORIM DAS VIRGENS

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

dietitian

### SUPERVISOR(S)

Nándor Ács

### E-MAIL

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### TOPIC

Obstetrics, gynecology - Nutrition

### VISION

Pregnancy can have better outcomes through early detection of anemia and implementation of nutritional interventions.

### MISSION

To raise awareness among pregnant patients regarding the effects of anemia.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** das Virgens, IPA. et al. (2023) Assessment of body composition in adults hospitalized with acute COVID-19: a scoping review. *Front Nutr*, **Q1**, IF: **5.000**

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the association of iron-deficiency anemia on pregnancy outcomes: a systematic review and meta-analysis

#### PROJECT 2:

Investigating the association of iron-deficiency anemia on congenital anomalies: a systematic review and meta-analysis



## BENJAMIN SKRIBEK

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Pál Ákos Deák

### E-MAIL

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### TOPIC

Radiology - Urology

### VISION

Our vision is that minimally invasive therapies will be readily available solutions in the treatment of multiple diseases.

### MISSION

We would like to simplify the treatment of patients suffering from various diseases, especially tumors. Our aim is to launch novel, humane, effective and safe therapies.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Skribek, B. et al. (2024) Ablation and laparoscopic adrenalectomy: Balancing efficacy and safety in the treatment of benign adrenal gland tumors: A systematic review and meta-analysis. *Heliyon*, **Q1**, IF: **4.000**

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy of minimally invasive interventions versus laparoscopy in the treatment of benign adrenal gland tumors: systematic review and meta-analysis

#### PROJECT 2:

Investigating the efficacy and safety of minimally invasive interventions in the treatment of low-intermediate risk prostate cancer: systematic review and meta-analysis



## RITA ZSUZSANNA VAJNA

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, SEMMELWEIS UNIVERSITY



### AGE

34 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Szabolcs Várbiro, Levente Sára

### E-MAIL

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### TOPIC

Obstetrics, gynecology - Endocrinology

### VISION

Finding the best therapy option for higher ovulation rate, endometrial thickness and pregnancy rate in women with PCOS.

### MISSION

With the best therapy more women with PCOS can have a child.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Vajna, RZS. et al. (2024) Strong Early Impact of Letrozole on Ovulation Induction Outperforms Clomiphene Citrate in Polycystic Ovary Syndrome. *Pharmaceuticals (Base)*, **Q1**, IF: **4.600**

### SPECIFIC GOALS

#### PROJECT 1:

Strong early impact of letrozole on ovulation induction outperforms clomiphene citrate in PCOS women: a systematic review and meta-analysis

#### PROJECT 2:

Investigating the efficacy of herbal remedies on metabolism and on endocrine status in women with PCOS: a systematic review and meta-analysis

**AGE**

44 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Szabolcs Várbíró

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**GÁBOR VLESKÓ**

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY

**TOPIC**

Obstetrics, gynecology - Reproduction medicine

**VISION**

To expand knowledge on contraception in the world, so that every women can avoid unwanted pregnancy.

**MISSION**

To find new information that can help a wide population of women to choose the best option for contraception.

**PUBLISHED ARTICLE(S)****PROJECT 1:** Vleskó, G. et al. (2024) Comparison of Combined Parenteral and Oral Hormonal Contraceptives: A Systematic Review and Meta-Analysis of Randomized Trials. *J Clin Med*, **Q1**, IF: **3.900****SPECIFIC GOALS****PROJECT 1:**

Investigating the efficacy and safety of combined parenteral and oral contraceptives in reproductive aged women. A systematic review and meta-analysis

**PROJECT 2:**

Investigating the role of obesity on hormonal contraceptives. A systematic review and meta-analysis

**AGE**

30 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Balázs Lintner

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**ISTVÁN BARADÁCS**

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, SEMMELWEIS UNIVERSITY

**TOPIC**

Obstetrics, gynecology - Oncology

**VISION**

The molecular targeted therapy could completely change oncological treatment.

**MISSION**

To learn about the possibilities offered by individualized therapy of gynecological cancers and get them to the bedside.

**PUBLISHED ARTICLE(S)****PROJECT 1:** Baradács, I. et al. (2024) PARP inhibitor era in ovarian cancer treatment: a systematic review and meta-analysis of randomized controlled trials. *J Ovarian Res*, **Q2**, IF: **4.000****SPECIFIC GOALS****PROJECT 1:**

Efficacy and Safety of Poly (ADP-ribose) Polymerase (PARP) Inhibitor Therapy for Advanced Ovarian Cancer: a systematic review and meta-analysis

**PROJECT 2:**

Efficacy and Safety of Combination Therapy with PARP Inhibitors and Anti-Angiogenic Agents in Ovarian Cancer: a systematic review and meta-analysis

**AGE**

32 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Tibor Szarvas

**E-MAIL**

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**TAMÁS FAZEKAS**

DEPARTMENT OF UROLOGY, SEMMELWEIS UNIVERSITY

**TOPIC**

Urology - Oncology

**VISION**

Precision medicine and individual molecular targeted therapy – a major breakthrough in oncology.

**MISSION**

To find biomarkers which can guide optimal therapy sequencing in prostate and bladder cancers.

**PUBLISHED ARTICLE(S)****PROJECT 1:** Fazekas, T. et al. (2022) Therapeutic sensitivity to standard treatments in BRCA positive metastatic castration-resistant prostate cancer patients—a systematic review and meta-analysis. *Prostate Cancer Prostatic Dis*, **D1**, IF: **4.800****PROJECT 2:** Fazekas, T. et al. (2023) Poly (ADP-ribose) Polymerase Inhibitors Have Comparable Efficacy with Platinum Chemotherapy in Patients with BRCA-positive Metastatic Castration-resistant Prostate Cancer. A Systematic Review and Meta-analysis. *Eur Urol Oncol*, **D1**, IF: **8.200****SPECIFIC GOALS****PROJECT 1:**

Different therapeutic sensitivity to abiraterone, enzalutamide and docetaxel in BRCA Positive Metastatic Castration-resistant Prostate Cancer Patients: a systematic review and meta-analysis

**PROJECT 2:**

PARP Inhibitors have Comparable Efficacy to Platinum Chemotherapy in Patients with BRCA-Positive Metastatic Castration-resistant Prostate Cancer a systematic review and meta-analysis



## TEODÓRA FILIPOV

DEPARTMENT OF TRANSPLANTATION AND SURGERY,  
SEMMELWEIS UNIVERSITY



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Pál Ákos Deák

### E-MAIL

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### TOPIC

Radiology - Urology

### VISION

To lower patient discomfort by offering minimally invasive treatment options and less invasive diagnostic tools.

### MISSION

To research novel techniques and stay up to date.

### SPECIFIC GOALS

#### PROJECT 1:

Ultrasound-based shear wave elastography of fibrosis correlates with biopsy findings in kidney transplanted patients: A systematic review and meta-analysis

#### PROJECT 2:

Percutaneous US guided cryoablation of fibroadenomas: Protocol for an interventional one arm open label clinical trial

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Filipov, T. et al. (2024) Investigating the role of ultrasound-based shear wave elastography in kidney transplanted patients: correlation between non-invasive fibrosis detection, kidney dysfunction and biopsy results-a systematic review and meta-analysis *J Nephrol*, **Q2**, IF: **3.400**



## DORINA GREFF

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Szabolcs Várbíró,  
Eszter Mária Horváth

### E-MAIL

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### TOPIC

Obstetrics, gynecology - Nutrition

### VISION

Increase fertility and complication-free pregnancy rate.

### MISSION

Novel prevention strategies, improve carbohydrate metabolism.

### SPECIFIC GOALS

#### PROJECT 1:

Inositol is an effective and safe treatment in polycystic ovary syndrome: a systematic review and meta-analysis of randomized controlled trials

#### PROJECT 2:

Myoinositol prevents gestational diabetes mellitus and related complications: a systematic review and meta-analysis of randomized controlled trials

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Greff, D. et al. (2023) Inositol is an effective and safe treatment in polycystic ovary syndrome: a systematic review and meta-analysis of randomized controlled trials *Biomedicines*, **Q1**, IF: **4.700**

**PROJECT 2:** Greff, D. et al. (2023) Myoinositols Prevent Gestational Diabetes Mellitus and Related Complications: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Nutrients*, **D1**, IF: **5.900**



## BALÁZS HAMAR

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zsolt Melczer

### E-MAIL

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### TOPIC

Obstetrics, gynecology - Oncology

### VISION

Primary HPV detection based cervical cancer screening in Hungary in the next 5 year above 30 years age group.

### MISSION

To change the Hungarian guideline on cervical cancer screening and treatment.

### SPECIFIC GOALS

#### PROJECT 1:

Trichomonas vaginal infection is associated with increased risk for cervical carcinogenesis: a systematic review and meta-analysis

#### PROJECT 2:

The effect of topical imiquimod treatment on reducing cervical intraepithelial neoplasia: systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Hamar, B. et al. (2023) Trichomonas vaginalis infection is associated with increased risk of cervical carcinogenesis: A systematic review and meta-analysis of 470 000 patients. *Int J Gynecol Obstet*, **Q1**, IF: **3.800**



## ESZTER HOFFMANN

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

31 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Csaba Demendi, Nándor Ács

### E-MAIL

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### TOPIC

Obstetrics, gynecology - Perinatology

### VISION

Contribute to the prevention of preterm birth.

### MISSION

Improving the protocol for the treatment and prevention of vaginal infection during pregnancy.

### SPECIFIC GOALS

#### PROJECT 1:

Routine screening of vaginal flora during pregnancy reduces the odds of preterm births: a systematic review and meta-analysis: a systematic review and meta-analysis

#### PROJECT 2:

Investigating the efficacy of treatment of abnormal vaginal flora during pregnancy to reduce the rate of preterm birth and premature rupture of membranes: a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Hoffmann, E. et al. (2023) Routine screening of abnormal vaginal flora during pregnancy reduces the odds of preterm birth: a systematic review and meta-analysis *Sci Rep*, **D1**, IF: **4.100**



## ANNA EVELIN JUHÁSZ

ALBERT SCHWEITZER HOSPITAL, HATVAN



### AGE

28 years

### EDUCATION

dietitian

### SUPERVISOR(S)

Réka Hermanné Juhász

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### TOPIC

Obstetrics, gynecology - Nutrition

### VISION

Normalise the metabolic disorders of the patients by receiving dietary fiber instead of medication.

### MISSION

To draw the attention of physicians to the results of studies regarding the dietary management of polycystic ovary syndrome.

### SPECIFIC GOALS

#### PROJECT 1:

Ranking the effects dietary fibers on glycemic control and lipid profiles in patients with type 2 diabetes

#### PROJECT 2:

Investigating the most effective dietary approaches in women with polycystic ovary syndrome (PCOS)

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Juhász, AE. et al. (2022) Galactomannans are the most effective soluble dietary fibers in type 2 diabetes: a systematic review and network meta-analysis. *Am J Clin Nutr*, **Q1**, IF: **7.100**

**PROJECT 2:** Juhász, AE. et al. (2023) Reply to Zurbau et al. *Am J Clin Nutr*, **D1**, IF: **7.100**



## BALÁZS KOMORÓCZY

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

34 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zsófia Benkó

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### TOPIC

Obstetrics, gynecology - Preterm birth

### VISION

To prevent adverse pregnancy outcomes e.g. preeclampsia and preterm birth to reduce avoidable fetal and maternal complications.

### MISSION

To develop a reliable screening model for pregnancy complications leading to preterm birth.

### SPECIFIC GOALS

#### PROJECT 1:

Optimal dose of Aspirin that prevents adverse pregnancy outcomes: a systematic review and meta analysis

#### PROJECT 2:

Screening for spontaneous preterm birth in singleton pregnancies: protocol of of an observational study



## ÁKOS MÁTRAI

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

34 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Nándor Ács

### E-MAIL

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### TOPIC

Obstetrics, gynecology - Infectology

### VISION

Provide optimal pregnancy care that contributes to the birth of healthy fetuses.

### MISSION

Highlight the risk of infectious diseases during pregnancy.

### SPECIFIC GOALS

#### PROJECT 1:

First-trimester influenza infection increases the odds of non-chromosomal birth defects: a systematic review and meta-analysis

#### PROJECT 2:

Investigation of the effects of maternal influenza during pregnancy on birth defects in the Hungarian Population between 1980 and 2009: a population based case-control study, cohort analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Mátrai, Á. et al. (2022) First-Trimester Influenza Infection Increases the Odds of Non-Chromosomal Birth Defects: A Systematic Review and Meta-Analysis. *Viruses*, **Q1**, IF: **4.700**

**PROJECT 2:** Mátrai, Á. et al. (2023) Reducing the Risk of Birth Defects Associated with Maternal Influenza: Insights from a Hungarian Case-Control Study. *J Clin Med*, **Q1**, IF: **3.900**



## BOGLÁRKA PETHŐ

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

35 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Nándor Ács

### E-MAIL

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### TOPIC

Obstetrics, gynecology - Perinatology

### VISION

Creating new knowledge to provide the best care for pregnant women to improve pregnancy outcomes.

### MISSION

Improving the reliability of screening of non-chromosomal birth defects.

### SPECIFIC GOALS

#### PROJECT 1:

Investigation of the Impact of Maternal Age on the Development of Congenital Anomalies in Hungarian Population between 1980 and 2009: population based study

#### PROJECT 2:

Investigation of the Impact of Maternal Age on the Development of Congenital Anomalies: systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Pethő, B. et al. (2024) Very Young and Advanced Maternal Age Strongly Elevates the Occurrence of Non-Chromosomal Congenital Anomalies: A Systematic Review and Meta-Analysis of Population-Based Studies. *Am J Obstet Gynecol*, **D1**, IF: **9.800**



## ANETT SZABÓ

DEPARTMENT OF UROLOGY, SEMMELWEIS UNIVERSITY



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zsolt Kopa

### E-MAIL

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### TOPIC

Urology - Andrology

### VISION

Educate patients regarding our findings on risk factors impacting fertility.

### MISSION

Larger-scale education of the population.

### SPECIFIC GOALS

#### PROJECT 1:

Risk factors associated with sperm DNA fragmentation: a systematic review and meta-analysis

#### PROJECT 2:

Efficacies of interventions aiming to improve sperm DNA fragmentation: a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Szabó, A. et al. (2023) Lifestyle-, environmental-, and additional health factors associated with an increased sperm DNA fragmentation: A systematic review and meta-analysis. *Reprod Biol Endocrinol*, **Q1**, IF: **4.400**

**AGE**

29 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Tibor Szarvas

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## ÁDÁM DÁNIEL SZÉLES

DEPARTMENT OF UROLOGY, SEMMELWEIS UNIVERSITY

**TOPIC**

Urology - Oncology

**VISION**

Therapy optimization of urothelial cancers.

**MISSION**

Utilization of biomarkers in urothelial cancers treated with immune checkpoint inhibitors.

**PUBLISHED ARTICLE(S)**

**PROJECT 1:** Széles, ÁD. et al. (2022) High Pretreatment Serum PD-L1 Levels Are Associated with Muscle Invasion and Shorter Survival in Upper Tract Urothelial Carcinoma *Biomedicines*, **Q1**, IF: **4.700**

**PROJECT 2:** Széles, ÁD. et al. (2022) Pre-treatment soluble PD-L1 as a predictor of overall survival for immune checkpoint inhibitor therapy: a systematic review and meta-analysis *Cancer Immunol Immunother*, **Q1**, IF: **5.800**

**SPECIFIC GOALS****PROJECT 1:**

Pre-treatment soluble PD-L1 as a predictor of overall survival for immune checkpoint inhibitor therapy: a systematic review and meta-analysis: a systematic review and meta-analysis

**PROJECT 2:**

High pretreatment sPD-L1 is associated with muscle-invasion and shorter survival in upper tract urothelial carcinoma (UTUC): a post hoc analysis of a prospectively collected serum samples

GROUP 4

# PHARMA & DERMA & IMMUNO





# GROUP 4

## PHARMA & DERMA & IMMUNO

### INTRODUCTION TO THE GROUP

The Pharma-Derma-Immuno research group includes 6 third-year and 4 fourth-year students, supported by 5 Scientific Methodology Supervisors and 10 clinical supervisors. This group explores a range of topics within pharmaceuticals, dermatology, and immunology, such as phytomedicine, oncology, antibiotics, statistics, psoriasis, plant-derived products, musculoskeletal disorders, acute pancreatitis, and cholesteatoma. Most students are involved in meta-analyses, with some working on clinical trial protocols, registry analysis, and surveys. This collaborative environment allows for a comprehensive approach to research, fostering insights that advance the fields of pharma, dermatology, and immunology.

### MEMBERS OF THE GROUP



**ANDRÁS BÁNVÖLGYI**  
*Group Leader*



**DEZSŐ CSUPOR**  
*Group Leader*



**MAHMOUD OBEIDAT**  
*Scientific Methodology Supervisor*



**FANNI ADÉL MEZNERICS**  
*Scientific Methodology Supervisor*



**ALEXANDER S. WENNING**  
*Scientific Methodology Supervisor*



**MARIE ANNE ENGH**  
*Scientific Methodology Supervisor*



**RITA NAGY**  
*Scientific Methodology Supervisor*

#### STUDENTS:

*Year III:* Dorottya Bastidas-Gergő, Noémi Ágnes Galajda, Anna Sára Lengyel, Márton Rakovics, Gabriella Anna Rapszky, Andrea Tóth-Mészáros / *Year IV:* Eszter Bakó, Garmaa Gantsetseg, Eszter Gulyás, István László Horváth, Kata Illés, Fanni Adél Meznerics

**SUPERVISORS:** András Bánvölgyi, Andrea Böszörményi, Dezső Csupor, Bánk Fenyves, Andrea Harnos (Statistician of the month: **September 2022**), Péter Holló, Tamás Horváth (Supervisor of the month: **September 2022**), Gellért Balázs Karvaly, Lajos Kemény, Gábor Kökény, Attila Ványolós

**AGE**

33 years

**EDUCATION**

biologist

**SUPERVISOR(S)**

Dezső Csupor, Attila Ványolos

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**DOROTTYA BASTIDAS-GERGŐ**

DEPARTMENT OF PHARMACY, SEMMELWEIS UNIVERSITY

**TOPIC**

Pharmacology - Phytomedicine

**VISION**

The evidence-based use of herbal products will be more widespread in the medical practice.

**MISSION**

To provide scientific evidence for health professionals to facilitate their work and their evidence-based decision making when applying herbal products.

**SPECIFIC GOALS****PROJECT 1:**

Assessment of efficacy of peppermint on nausea and vomiting: A systematic review and meta-analysis of randomized clinical trials

**PROJECT 2:**

Elixirium thymi compositum in the treatment of acute bronchitis in pediatric patients: Protocol of a multicentre, randomized, double-blind clinical trial

**AGE**

26 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Péter Holló, András Bánvölgyi

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**NOÉMI ÁGNES GALAJDA**

DEPARTMENT OF DERMATOLOGY, VENEREOLOGY AND DERMATOONCOLOGY, SEMMELWEIS UNIVERSITY

**TOPIC**

Dermatology - Psoriasis

**VISION**

Reducing the burden and mortality caused by comorbidities in patients with immune-mediated inflammatory diseases (IMIDs).

**MISSION**

Optimizing the therapeutic sequence considering their effects on comorbidities.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the effect of TNF-inhibitors on the risk of cardiovascular events in immune-mediated inflammatory diseases  
Method: systematic review and meta-analysis

**PROJECT 2:**

Investigating the effect of TNF-inhibitors on the risk of heart failure  
Method: systematic review and meta-analysis

**PUBLISHED ARTICLE(S)**

**PROJECT 1:** Galajda, NÁ. et al. (2024) Reducing cardiovascular risk in immune-mediated inflammatory diseases: Tumour necrosis factor inhibitors compared to conventional therapies-A systematic review and meta-analysis.

*J Eur Acad Dermatol Venereol*, **Q1**, IF: **9.200**

**AGE**

27 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Lajos Kemény

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**ANNA SÁRA LENGYEL**

DEPARTMENT OF DERMATOLOGY, VENEREOLOGY AND DERMATOONCOLOGY, SEMMELWEIS UNIVERSITY

**TOPIC**

Dermatology - Oncology

**VISION**

To improve and extend the life of melanoma patients.

**MISSION**

To translate basic research to clinical medicine to optimize treatment strategies.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the efficacy and safety of immune-based and targeted therapies and their combinations in the management of advanced/ metastatic melanoma: a systematic review and network meta-analysis

**PROJECT 2:**

Investigating the efficacy and safety of adjuvant therapies in the management of melanoma: a systematic review and network meta-analysis

**PUBLISHED ARTICLE(S)**

**PROJECT 1:** Lengyel, AS. et al. (2024) Safety and Efficacy Analysis of Targeted and Immune Combination Therapy in Advanced Melanoma-A Systematic Review and Network Meta-Analysis. *Int J Mol Sci*, **D1**, IF: **4.900**



## MÁRTON RAKOVICS

LORÁND EÖTVÖS UNIVERSITY (ELTE)



### AGE

38 years

### EDUCATION

sociologist, statistician

### SUPERVISOR(S)

Andrea Harnos

### E-MAIL

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### TOPIC

COVID-19 -Statistics

### VISION

Make AI an everyday tool in healthcare.

### MISSION

Develop AI models for disease severity classification problems.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Efficacy of Early Severity Prediction Models of Covid-19: a systematic review and meta-analysis

#### PROJECT 2:

Developing a Novel COVID-19 Severity Prediction Deep Learning Model: analysis of the Covid-19 registry data



## GABRIELLA ANNA RAPSZKY

DEPARTMENT OF EMERGENCY MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Bánk Fenyves

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### TOPIC

Emergency medicine - Antibiotics

### VISION

Improve the management of patients presenting at the emergency department.

### MISSION

Contribute to the development of current guidelines.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the efficacy of rapid molecular assays in the diagnosis of bloodstream infections: a systematic review and meta-analysis

#### PROJECT 2:

Investigating the association of ClotPro®-guided therapy with blood product use and mortality in patients with gastrointestinal bleeding: a retrospective study



## ANDREA TÓTH-MÉSZÁROS

COGNIZANT HUNGARY



### AGE

45 years

### EDUCATION

pharmacist

### SUPERVISOR(S)

Dezső Csupor

### E-MAIL

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### TOPIC

Pharmacology - Phytomedicine

### VISION

To make the application of adaptogens part of the evidence-based medicine.

### MISSION

To investigate the adaptogens' mechanism of action, their clinical efficacy, their safety profile, optimal dose and optimal length of treatment.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of adaptogenic plants on stress: a systematic review and meta-analysis

#### PROJECT 2:

Investigating the effect of a single dose Rhodiola rosea extract on cognitive functions in a stressful situation: protocol for a randomized, double-blind, placebo-controlled clinical trial

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Tóth-Mészáros, A. et al. (2023) The effect of adaptogenic plants on stress: A systematic review and meta-analysis. *Journal of Functional Foods*, Q1, IF: 5.600

**AGE**

40 years

**EDUCATION**

pharmacist

**SUPERVISOR(S)**

Andrea Böszörményi

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**ESZTER BAKÓ**DEPARTMENT OF PHARMACOGNOSY AND TOXICOLOGY,  
SEMMELWEIS UNIVERSITY**TOPIC**

Pharmacology - Plant-derived products

**VISION**

The best science to create the best product.

**MISSION**

To provide more scientific evidence for herbal therapies.

**PUBLISHED ARTICLE(S)****PROJECT 1:** Bakó, E. et al. (2024) Chemometric analysis of monoterpenes and sesquiterpenes of conifers. *J Frontiers in Planet Science*, **Q1**, IF: **5.600****SPECIFIC GOALS****PROJECT 1:**

Investigating the efficacy of topically applied essential oils in musculoskeletal disorders: a systematic review and meta-analysis

**PROJECT 2:**

Investigating the volatile constituents of Pinaceae and Cupressaceae families: principal component analysis

**AGE**

35 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Gábor Kökény

**E-MAIL**

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**GARMAA GANTSETSEG**

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY

**TOPIC**

Molecular research - Chronic kidney disease

**VISION**

Contribute to promote healthy communities supported by evidence based and translational medicine.

**MISSION**

To promote antibiotic therapy in intensive care; become an expert in the utilization of antibiotic therapeutic drug monitoring results.

**PUBLISHED ARTICLE(S)****PROJECT 1:** Garmaa, G. et al. (2023) HK-2 cell response to TGF- $\beta$  highly depends on cell culture medium formulations. *Histochem Cell Biol*, **Q1**, IF: **2.300****PROJECT 2:** Garmaa, G. et al. (2024) A Systematic Review and Meta-Analysis of microRNA Profiling Studies in Chronic Kidney Diseases. *Noncoding RNA*, **Q1**, IF: **4.300****SPECIFIC GOALS****PROJECT 1:**

To investigate the effect of beta-lactam TDM in critically ill patients: a systematic review and meta-analysis

**PROJECT 2:**

To evaluate the pharmacokinetics-based guidance of colistin therapy: protocol

**AGE**

32 years

**EDUCATION**

clinical hospital pharmacist

**SUPERVISOR(S)**

Gellért Balázs Karvaly

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**ESZTER GULYÁS**UNIVERSITY PHARMACY DEPARTMENT OF PHARMACY  
ADMINISTRATION. SEMMELWEIS UNIVERSITY**TOPIC**

Pharmacology - Musculoskeletal disorders

**VISION**

To facilitate strong cooperation between clinical pharmacists, clinicians and the clinical laboratory concerning the antibiotic therapy of the critically ill.

**MISSION**

To promote antibiotic therapy in intensive care; become an expert in the utilization of antibiotic therapeutic drug monitoring results.

**PUBLISHED ARTICLE(S)****PROJECT 1:** Gulyás, E. et al. (2024) Assessment of the practical impact of adjusting beta-lactam dosages based on therapeutic drug monitoring in critically ill adult patients: A systematic review and meta-analysis of randomized clinical trials and observational studies. *Sci Rep*, **D1**, IF: **4.600****SPECIFIC GOALS****PROJECT 1:**

To investigate the effect of beta-lactam TDM in critically ill patients: a systematic review and meta-analysis

**PROJECT 2:**

Therapeutic drug monitoring of colistin: a systematic review and meta-analysis



## ISTVÁN LÁSZLÓ HORVÁTH

UNIVERSITY PHARMACY DEPARTMENT OF PHARMACY ADMINISTRATION. SEMMELWEIS UNIVERSITY



### AGE

33 years

### EDUCATION

clinical hospital pharmacist

### SUPERVISOR(S)

Dezső Csopor

### E-MAIL

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semmelweis-univ.hu

### TOPIC

Pharmacology - Acute pancreatitis

### VISION

Pharmacists have an essential role in the multidisciplinary team.

### MISSION

Develop official clinical pharmacy services in Hungary.

### SPECIFIC GOALS

#### PROJECT 1:

To investigate ulinastatin-somatostatin analogue combination therapy in acute pancreatitis: systematic review and meta-analysis of randomized controlled trials

#### PROJECT 2:

To investigate the effect of proton pump inhibitors in acute pancreatitis: systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Horváth, I.L. et al. (2022) The combination of ulinastatin and somatostatin reduces complication rates in acute pancreatitis: a systematic review and meta-analysis of randomized controlled trials *Sci Rep*, **Q1**, IF: **4.600**

**PROJECT 2:** Horváth, I.L. et al. (2023) No evidence for the benefit of PPIs in the treatment of acute pancreatitis: A systematic review and meta-analysis. *Sci Rep*, **Q1**, IF: 4.600



## KATA ILLÉS

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



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Tamás Horváth

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### TOPIC

Otorhinolaryngology - Cholesteatoma

### VISION

Clinicians use the most effective therapeutic options in the field of middle ear surgery.

### MISSION

Investigate therapeutic options and create high-level evidence.

### SPECIFIC GOALS

#### PROJECT 1:

Mastoid obliteration decreases the recurrent and residual disease: a systematic review and meta-analysis

#### PROJECT 2:

Investigating the predictive factors of the success rate after tympanic membrane reconstruction: a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Illés, K. et al. (2023) Factors influencing successful reconstruction of tympanic membrane perforations: a systematic review and meta-analysis. *Biomedicine*, **Q1**, IF: **4.700**

**PROJECT 2:** Illés K. et al. (2023) Reply to Mastoid Obliteration Decreases the Recurrent and Residual Disease: Systematic Review and Meta-Analysis. *Laryngoscope*, **D1**, IF: **2.600**



## FANNI ADÉL MEZNERICS

DEPARTMENT OF DERMATOLOGY, SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

András Bánvölgyi

### E-MAIL

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### TOPIC

Dermatology - Rheumatology

### VISION

Patients with chronic dermatological and rheumatological disorders could have a better quality of life.

### MISSION

Urging the implementation of novel disease modifying and monitoring methods in clinical practice.

### SPECIFIC GOALS

#### PROJECT 1:

Multi-Biomarker Disease Activity score: an objective tool for monitoring rheumatoid arthritis? A systematic review and meta-analysis.

#### PROJECT 2:

Platelet-rich plasma in chronic wound management. A systematic review and meta-analysis of randomized clinical trials.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Meznerics, FA. et al. (2022) Multibiomarker disease activity score: an objective tool for monitoring rheumatoid arthritis? A systematic review and meta-analysis. *Rheumatology*, **Q1**, IF: **5.500**

**PROJECT 2:** Meznerics, FA. et al. (2022) Platelet-Rich Plasma in Chronic Wound Management: A Systematic Review and Meta-Analysis of Randomized Clinical Trials. *Rheumatology*, **Q1**, IF: **5.500**

GROUP 5  
**PEDIATRICS**





# GROUP 5 PEDIATRICS



## INTRODUCTION TO THE GROUP

The Pediatrics research group includes 11 third-year and 9 fourth-year students, supported by 3 Scientific Methodology Supervisors and 20 clinical supervisors. This group focuses on a broad range of pediatric health topics, including IBD, conductive education, placental and umbilical cord pathologies, brain tumor oncotherapy, infectology, oncology and hematology, acute pancreatitis, IVH, physiotherapy, cystic fibrosis, COVID-19, pediatric gastroenterology, neonatology, cerebral palsy, forensic radiology, and pediatric emergency care for long COVID syndrome. Most students are involved in meta-analyses, while others are working on registry analysis, clinical trial protocols, and ongoing clinical trials. This interdisciplinary structure supports a collaborative approach, enhancing research that addresses critical issues in pediatric healthcare.

## MEMBERS OF THE GROUP



**MIKLÓS GARAMI**  
*Group Leader*



**RITA NAGY**  
*Scientific Methodology Supervisor*



**MÁRK VIKTOR HERNÁDFŐI**  
*Scientific Methodology Supervisor*



**MAHMOUD OBEIDAT**  
*Scientific Methodology Supervisor*

### STUDENTS:

**Year III:** Kinga Anna Budai, Renáta Mária Kiss-Miki, Erika Kolumbán, Janka Kovács, Nicole Li, Gréta Szilvia Major, Zsuzsanna Nagy, Márton Szabados, Ágnes Eszter Tímár, Vivien Unger, Petra Varga /  
**Year IV:** Dorina Rita Bajzát, Adrienn Ferencsikné Kéri, Réka Garai, Márk Viktor Hernádfői, Ágoston Jánosi, Dóra Kornélia Koch, Kinga Kovács, Adrienn Anna Lukács, Péter Misnyovszki, Nóra Zimonyi

**SUPERVISORS:** Viktor Dombrádi, Éva Feketéné Szabó, Andrea Ferencz, Péter Gaál, Miklós Garami (Supervisor of the month: **February 2024**), Péter Gaál, Ákos Gasparics (Supervisor of the month: **March 2023**), Balázs Hankó, Mónika Horváth, Gábor Kovács, Péter Krivácsy, Csaba Lódi (Supervisor of the month: **November 2023**), Boglárka Marcsa, Katalin Müller (Supervisor of the month: **February 2023**), Andrea Párniczky, Attila Szabó, Miklós Szabó (Supervisor of the month: **July 2023**), Klára Törő, Ibolya Túri



10/23

**AGE**

32 years

**EDUCATION**

pharmacist

**SUPERVISOR(S)**

Csaba Lódi, Balázs Hankó

**E-MAIL**budai.kinga@pharma.  
semmelweis-univ.hu**KINGA ANNA BUDAI**UNIVERSITY PHARMACY, INSTITUTE OF PHARMACEUTICAL  
ORGANISATION, SEMMELWEIS UNIVERSITY**TOPIC**

Pediatrics - Infectology

**VISION**

To improve the effectiveness of antimicrobial therapy and extend the life expectancy of critically ill children.

**MISSION**

To improve the antibiotic dosing based on serum drug levels and up to date scientific results among critically ill children.

**PUBLISHED ARTICLE(S)****PROJECT 1:** Budai, KA. et al. (2024) Extended infusion of  $\beta$ -lactams significantly reduces mortality and enhances microbiological eradication in paediatric patients: a systematic review and meta-analysis. *EClinicalMedicine*, **D1**, IF: **15.100****SPECIFIC GOALS****PROJECT 1:**Investigating the Efficacy and Safety of Extended Versus Short-term Infusion of  $\beta$ -lactams in Paediatric Patients: A Systematic Review and Meta-analysis**PROJECT 2:**

Comparison of Efficacy and Plasma Concentrations of Extended and Intermittent Infusion of B-lactams in Critically ill Paediatric Patients Protocol of Randomized Clinical Trial

**AGE**

29 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Miklós Garami

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drkissmikirenata@gmail.com

**RENÁTA MÁRIA KISS-MIKI**

ZALA COUNTY SZENT RAFAEL HOSPITAL

**TOPIC**

Pediatrics - Brain tumor oncotherapy

**VISION**

To give a better life with less side effects for pediatric brain tumor survivors.

**MISSION**

To help pediatric brain cancer patients and researchers to improve quality of life.

**SPECIFIC GOALS****PROJECT 1:**

Proton or Photon? Comparison of Survival and Toxicity Among Pediatric Brain Cancer Patients: A Systematic Review and Meta-analysis

**PROJECT 2:**

Adaptation of Cerebellar Affective Cognitive/Schmahmann Syndrome Scale and Cerebellar Mutism Scale in Hungarian for Children: Questionnaire Adaptation

**AGE**

48 years

**EDUCATION**

dentist

**SUPERVISOR(S)**

Péter Gaál, Ibolya Turi

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**ERIKA KOLUMBÁN**

ANDRÁS PETŐ FACULTY, SEMMELWEIS UNIVERSITY

**TOPIC**

Pediatrics - Conductive education

**VISION**

To improve the life quality of cerebral palsy patients through better rehabilitation and to contribute to world recognition of conductive education.

**MISSION**

To improve the condition of cerebral palsy patients by applying evidence-based breathing exercises in their rehabilitation care.

**SPECIFIC GOALS****PROJECT 1:**

Supplementary respiratory therapy improves pulmonary functions in paediatric patients with cerebral palsy: a systematic review and meta-analysis

**PROJECT 2:**

Effects of conductive breathing exercises on pulmonary functions of school-aged children with cerebral palsy: study protocol of a randomized control trial

**PUBLISHED ARTICLE(S)****PROJECT 1:** Kolumbán, E. et al. (2024) Supplementary Respiratory Therapy Improves Pulmonary Function in Pediatric Patients with Cerebral Palsy: A Systematic Review and Meta-Analysis. *J Clin Med*, **Q1**, IF: **3.900**



## JANKA KOVÁCS

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



### AGE

39 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Miklós Garami

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### TOPIC

Pediatrics - Brain tumor oncotherapy

### VISION

Improve the life quality and extend the life expectancy of children treated with brain cancer.

### MISSION

To provide guidelines for the treatment of diseases involving the CNS (malignancies, hydrocephalus).

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Kovács, J. et al. (2024) Antibiotic-Impregnated Ventriculoperitoneal Shunts Decrease Bacterial Shunt Infection: A Systematic Review and Meta-Analysis.

*Neurosurgery*, **D1**, IF: **4.800**

**PROJECT 2:** Kovács, J. et al. (2024) In Reply: Antibiotic-Impregnated Ventriculoperitoneal Shunts Decrease Bacterial Shunt Infection: A Systematic Review and Meta-Analysis.

*Neurosurgery*, **D1**, IF: **4.800**

### SPECIFIC GOALS

#### PROJECT 1:

Shifting Paradigms: Antibiotic-Impregnated Ventriculoperitoneal-Shunts for Infection Prevention: A Systematic Review and Meta-analysis

#### PROJECT 2:

Shifting Paradigms: Antibiotic-Impregnated Ventriculoperitoneal-Shunts for Infection Prevention: A Systematic Review and Meta-analysis



## NICOLE LI

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

22 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Miklós Garami

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### TOPIC

Pediatrics - Acute pancreatitis

### VISION

Improve the quality of life of pediatric oncology patients during and after treatment..

### MISSION

Confirm the efficacy of TCM and promote the use of TCM complementary therapies.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Addition of Complementary Chinese Herbal Medicine Among Pediatric Oncology Patients Treated with Conventional Therapies: A Systematic Review and Meta-Analysis

#### PROJECT 2:

Safety and Efficacy of Turmeric (Curcuma longa) Extract and Curcumin Supplements in Malignant Oncology Disorders: A Systematic Review and Meta-Analysis.



## GRÉTA SZILVIA MAJOR

HEIM PÁL NATIONAL PEDIATRIC INSITUTE



### AGE

27 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Ákos Gasparics

### E-MAIL

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### TOPIC

Pediatrics - Placental and umbilical cord pathologies

### VISION

To improve the quality of life and extend the life expectancy of newborns via better early management.

### MISSION

To optimize the time of cord clamping and dosage of caffeine among preterms.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Outcomes of Neonatal Resuscitation With and Without Intact Cord: a Systematic Review and Meta-Analysis

#### PROJECT 2:

Comparing the Effects of Different Dosages of Caffeine on Neonatal Mortality and Morbidity: a Systematic Review and Meta-Analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Major, GSZ. et al. (2024) Umbilical cord management in newborn resuscitation: A systematic review and meta-analysis

*Pediatr Res*, **D1**, IF: **3.600**



## ZSUZSANNA NAGY

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,  
SEMMELWEIS UNIVERSITY



### AGE

44 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Miklós Szabó

### E-MAIL

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### TOPIC

Pediatrics - IVH

### VISION

Implement new effective and safe neuroprotective methods at national and international level.

### MISSION

To study and validate neuroprotective delivery room stabilization methods in preterm infants.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the Onset of Intraventricular Haemorrhage in Preterm Neonates: A Systematic Review and Meta-analysis

#### PROJECT 2:

Onset of Intraventricular Haemorrhage in Preterm Infants: Prospective Observational Trial



## MÁRTON SZABADOS

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



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Miklós Garami

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### TOPIC

Pediatrics - Oncology and hematology

### VISION

Childhood cancer patients and survivors will live a rich and full life.

### MISSION

To establish a well designed follow-up system, focusing on quality of life of and psychological well-being of these patients.

### SPECIFIC GOALS

#### PROJECT 1:

Impact of the Tumor Location on Developing Affective Disorders among Childhood Brain Cancer Survivors: A Systematic Review and Meta-analysis

#### PROJECT 2:

The Hungarian Linguistic and Cultural Adaptation of The Minneapolis-Manchester Quality of Life Instrument (MMQL) – Adolescent form

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Szabados, M. et al. (2023) Association of tumor location with anxiety and depression in childhood brain cancer survivors: a systematic review and meta-analysis *Child Adolesc Psychiatry Ment Health*, **D1**, IF: **5.600**



## ÁGNES ESZTER TÍMÁR

HEIM PÁL NATIONAL PEDIATRIC INSTITUTE



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Katalin Müller

### E-MAIL

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### TOPIC

Pediatrics - IBD

### VISION

Improve the quality of life of IBD patients through proper treatment.

### MISSION

Assess long-term disease outcomes and treatment options of IBD patients with extraintestinal manifestations.

### SPECIFIC GOALS

#### PROJECT 1:

Beyond the Gut: A Systematic Review and Meta-analysis of Advanced Therapies for Inflammatory Bowel Disease-associated Extraintestinal Manifestations

#### PROJECT 2:

Investigating the Association between Extraintestinal Manifestations and the Intestinal Disease Course in Children with Inflammatory Bowel Disease: registry analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Tímár, ÁE. et al. (2024) Beyond the Gut: A Systematic Review and Meta-analysis of Advanced Therapies for Inflammatory Bowel Disease-associated Extraintestinal Manifestations. *J Chrons Colitis*, **D1**, IF: **8.000**

**PROJECT 2:** Tímár, ÁE. et al. (2024) Inguinal hernioplasty in children-open or laparoscopic?: A retrospective cohort study of 1,072 cases. *Pediatr Surg Int*, **Q1**, IF: **1.500**



## VIVIEN UNGER

CSOLNOKY FERENC HOSPITAL



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Ákos Gasparics, Péter Varga

### E-MAIL

ungervivien@gmail.com

### TOPIC

Pediatrics - Placental and umbilical cord pathologies

### VISION

To provide the highest quality of care to the very preterm infants, the most fragile neonates.

### MISSION

To find the optimal mode of delivery for very preterm neonates and to provide timely and accurate data about periviable preterms in Hungary.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Unger, V. et al. (2024) Cesarean delivery is associated with lower neonatal mortality among breech pregnancies - a systematic review and meta-analysis of preterm deliveries  $\leq 32$  weeks of gestation *Am J Obstet Gynecol*, **D1**, IF: **9.800**

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the relation between the mode of delivery on the mortality and morbidity among extremely and very preterm infants: a systematic review and meta-analysis

#### PROJECT 2:

Characteristics and outcomes of periviable infants in Hungary: a registry analysis



## PETRA VARGA

HEIM PÁL NATIONAL PEDIATRIC INSTITUTE



### AGE

26 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Eszter Tuboly, Andrea Párniczky

### E-MAIL

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### TOPIC

Pediatrics - Oncology and hematology

### VISION

Modernize clinical care and research support in pediatric oncology.

### MISSION

Bringing in future-proof, global approaches in risk stratification of childhood cancer.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Varga, P. et al. (2024) From simple factors to artificial intelligence: evolution of prognosis prediction in childhood cancer: a systematic review and meta-analysis *EClinicalMedicine*, **D1**, IF: 9.600

### SPECIFIC GOALS

#### PROJECT 1:

Comparing The Prognostic Accuracy of Prediction Models Used in Childhood Cancer: A Systematic Review and Meta-analysis

#### PROJECT 2:

Building a Prognostic Model Using Machine Learning for Childhood Cancer: Retrospective Cohort Study - Registry Analysis

YEAR IV.



## DORINA RITA BAJZÁT

HEIM PÁL NATIONAL PEDIATRIC INSTITUTE



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Katalin Müller

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### TOPIC

Pediatrics - Pediatric inflammatory bowel disease, Pediatric gastroenterology

### VISION

Good timing and good methods of surgery elevate the quality of life of children with inflammatory bowel disease.

### MISSION

Assess the current situation of surgical interventions and improve the quality by communicating the results.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Bajzát, DR. et al. (2023) Safety Analysis of Preoperative Anti-TNF- $\alpha$  Therapy in Pediatric IBD After Intestinal Resection: A Systematic Review and Meta-analysis *Inflammatory Bowel Diseases*, **Q1**, IF: **4.900**

### SPECIFIC GOALS

#### PROJECT 1:

Safety analysis of preoperative anti-TNF therapy in pediatric IBD after intestinal resection: a systematic review and meta-analysis

#### PROJECT 2:

Intestinal resections in pediatric Crohn's disease: a nation-wide survey based on the Hungarian Pediatric IBD Registry



## ADRIENN KRISZTINA FERENCSIKNÉ KÉRI

HEIM PÁL NATIONAL PEDIATRIC INSTITUTE



### AGE

31 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Andrea Párniczky

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### TOPIC

Pediatrics - Cystic fibrosis

### VISION

To improve the life quality and extend the life expectancy of cystic fibrosis patients with better clinical assessment.

### MISSION

To improve the clinical assessment of cystic fibrosis related glucose abnormalities by applying up to date scientific results.

### SPECIFIC GOALS

#### PROJECT 1:

Early onset of abnormal glucose tolerance in patients with cystic fibrosis: a systematic review and meta-analysis

#### PROJECT 2:

Prevalence of abnormal glucose tolerance in children with cystic fibrosis: a single center prospective cohort analysis (Cystic Fibrosis Related Pancreatic Disorders Registry (CFRPDR))

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Kéri, AK. et al. (2024) Early onset of abnormal glucose tolerance in patients with cystic fibrosis: A systematic review and meta-analysis. *J Cyst Fibros*, **D1**, IF: **5.200**



## RÉKA GARAI

FIRST DEPARTMENT OF PEDIATRICS, SEMMELWEIS UNIVERSITY



### AGE

32 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Attila Szabó, Péter Krivácsy

### E-MAIL

garai.reka@med.semmelweis-univ.hu

### TOPIC

Pediatrics - Long COVID syndrome, Pediatric Emergency

### VISION

To give KINDNESS, CARE, COMFORT.

### MISSION

The fact and sensation of SAFETY is natural for our patients.

### SPECIFIC GOALS

#### PROJECT 1:

Clinical assessment of children with long Covid syndrome

#### PROJECT 2:

Thyroid disturbances after Covid-19 and the effect of vaccination in children: a prospective tri-center registry analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Garai, R. et al. (2022) Clinical assessment of children with long COVID syndrome. *Pediatric Research*, **Q1**, IF: **3.600**

**PROJECT 2:** Garai, R. et al. (2024) Head-to-head comparison of influenza vaccines in children: A systematic review and meta-analysis. *J Transl Med*, **D1**, IF: **7.400**



## MÁRK VIKTOR HERNÁDFŐI

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



### AGE

30 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Miklós Garami

### E-MAIL

hernadfoi.mark@gmail.com

### TOPIC

Pediatrics - Oncology and hematology

### VISION

Improving survival and quality of life in pediatric oncology.

### MISSION

Define and improve the long-term socioeconomic effects of cancer treatment and research new therapeutical approaches.

### SPECIFIC GOALS

#### PROJECT 1:

The Burden of Childhood Cancer – Social and Economic Challenges in Adulthood: a Systematic Review and Meta-Analysis

#### PROJECT 2:

Efficacy and Side Effect Profile of Dinutuximab Beta Therapy in Hungarian Neuroblastoma Patients: a Registry-based Analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Hernádfői, MV. et al. (2024) Burden of Childhood Cancer and the Social and Economic Challenges in Adulthood: A Systematic Review and Meta-Analysis. *Jama Pediatr*, **D1**, IF: **26.000**

**AGE**

30 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Andre Párniczky

**E-MAIL**

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## ÁGOSTON JÁNOSI

HEIM PÁL NATIONAL PEDIATRIC INSTITUTE

**TOPIC**

Pediatrics - COVID-19

**VISION**

A World with established ground rules in fighting a pandemic.

**MISSION**

Acquiring a deeper understanding of research methods, hence increasing my knowledge in paediatric care.

**SPECIFIC GOALS****PROJECT 1:**

Two-thirds of SARS CoV-2 infected school-age children are asymptomatic: a systematic review and meta-analysis

**PROJECT 2:**

Investigating the effectiveness and safety of TNF-alpha inhibitors in COVID-19 therapy: a systematic review and meta-analysis

**AGE**

28 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Gábor Kovács

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## DÓRA KORNÉLIA KOCH

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

**TOPIC**

Pediatrics - Oncology and hematology

**VISION**

Achieve the best therapeutic response/effect with the lowest possible toxicity when using chemotherapeutic agents (e.g. pharmacokinetic modifications).

**MISSION**

Prevent severe toxicity of chemotherapeutics in pediatric malignancies.

**SPECIFIC GOALS****PROJECT 1:**

Comparison of toxicity levels between bolus injection and continuous vincristine infusion in patients with malignancies: a systematic review and meta-analysis

**PROJECT 2:**

Comparison of pharmacokinetic parameters and toxicity levels between bolus injection and continuous vincristine infusion in children with hematologic malignancies: Protocol and pilot of a prospective randomised trial

**AGE**

29 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Ákos Gasparics

**E-MAIL**

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## KINGA KOVÁCS

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, SEMMELWEIS UNIVERSITY

**TOPIC**

Pediatrics - Neonatology

**VISION**

The focus in neonatal care should be on eliminating as many complications of prematurity as possible.

**MISSION**

Investigating antenatal, perinatal and postnatal risk factors.

**SPECIFIC GOALS****PROJECT 1:**

The prognostic role of concomitant histopathologic fetal inflammatory response with chorioamnionitis in adverse outcomes of preterm neonates: a systematic review and meta-analysis

**PROJECT 2:**

The intrauterine route of inflammation: Distribution along the umbilical cord: cohort analysis

**PUBLISHED ARTICLE(S)**

**PROJECT 1:** Kovács, K. et al. (2023) The histologic fetal inflammatory response and neonatal outcomes: systematic review and meta-analysis. *Am J Obstet Gynecol*, **D1**, IF: **9.800**



## ADRIENN ANNA LUKÁCS

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

27 years

### EDUCATION

physiotherapist

### SUPERVISOR(S)

Mónika Horváth

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### TOPIC

Pediatrics - Physiotherapy

### VISION

Providing profession specific, relevant, scientific information.

### MISSION

To improve pediatric physiotherapeutic care among MIS-C children.

### SPECIFIC GOALS

#### PROJECT 1:

Evaluation of the prevalence and characteristics of cardiovascular abnormalities in COVID-19 associated Multisystem Inflammatory Syndrome in Children (MIS-C): A systematic review and meta-analysis

#### PROJECT 2:

Assessment of Hungarian children with Multisystem Inflammatory Syndrome in Children (MIS-C): Registry analysis



## PÉTER MISNYOVSZKI

DEPARTMENT OF FORENSIC MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

31 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Klára Törő, Boglárka Marcsa

### E-MAIL

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### TOPIC

Forensic radiology

### VISION

A new, clear methodology on post-mortem evaluation including novel techniques will be established.

### MISSION

Propagate the use of modern post-mortem techniques.

### SPECIFIC GOALS

#### PROJECT 1:

Autopsy or virtopsy: the future of post-mortem analysis, a systematic review and meta-analysis

#### PROJECT 2:

Forecasting by weather : a registry analysis of environmental parameters associated with suicidal death



## NÓRA ZIMONYI

ANDRÁS PETŐ PRACTICE PRIMARY SCHOOL, SEMMELWEIS UNIVERSITY



### AGE

38 years

### EDUCATION

conductor

### SUPERVISOR(S)

Péter Gaál, Ibolya Túri, Viktor Dombrádi

### E-MAIL

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### TOPIC

Pediatrics - Cerebral palsy

### VISION

Living in a world in which citizens with CP are a productive and integral part of society.

### MISSION

Fully committed to creating a more targeted developmental program for CP patients.

### SPECIFIC GOALS

#### PROJECT 1:

Executive functions are severely impaired in cerebral palsy: a systematic review and meta-analysis

#### PROJECT 2:

Comparison of executive function test results between children with cerebral palsy (CP) and typically developing children: clinical trial.

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Kovács, K. et al. (2024) Comparison of Executive Function Skills between Patients with Cerebral Palsy and Typically Developing Populations: A Systematic Review and Meta-Analysis. *J Clin Med*, **Q1**, IF: **9.800**

GROUP 6  
**GASTROENTEROLOGY**





# GROUP 7

## GASTROENTEROLOGY



### INTRODUCTION TO THE GROUP

The Gastroenterology research group includes 16 third-year and 8 fourth-year students, supported by 4 Scientific Methodology Supervisors and 25 clinical supervisors. This group's research spans a broad range of gastroenterological and hepatological topics, including pancreaticobiliary diseases, acute pancreatitis, C. diff infections, GERD, IBD, hepatology, radiology, diabetes mellitus, microscopic colitis, probiotics, gastrointestinal bleeding, and diagnostic methods in pancreatic cancer. Most students are involved in meta-analyses, with others contributing to registry analysis, clinical trial protocols, narrative reviews, surveys, and ongoing clinical trials. This interdisciplinary structure encourages a collaborative research environment, enhancing insights into critical issues in gastroenterology and hepatology.

### MEMBERS OF THE GROUP



**BÁLINT ERÖSS**  
Group Leader



**PÉTER JENŐ HEGYI**  
Group Leader



**BRIGITTA TEUTSCH**  
Scientific Methodology  
Supervisor



**ANETT RANCZ**  
Scientific Methodology  
Supervisor



**ESZTER ÁGNES SZALAI**  
Scientific Methodology  
Supervisor



**MAHMOUD OBEIDAT**  
Scientific Methodology  
Supervisor



#### STUDENTS:

**Year III:** Dániel Steve Bednárík, Ruben Zsolt Borbély, Bettina Csilla Budai, Diana Elena Floria, Endre Botond Gagyí, Cai Gefu, Bálint Gellért, Jakub Hoferica, Sarolta Beáta Kávási, Mónika Bernadett Lipp, Petrana Martinekova, Panagiotis Paraskevopoulos, Hajnal Székely, Edina Tari, Dorottya Tarján, Laura Tóth /  
**Year IV:** Sára Bognár, Anna Júlia Éliás, Marie Anne Engh, Adrienn Nikolett Kovács, Mahmoud Obeidat, Dániel Pálinkás, Anett Rancz, Olga Julia Zahariev

**SUPERVISORS:** Szabolcs Ábrahám (Supervisor of the month: **January 2024**), Péter Banovcin, Stefania Bunduc, Bálint Eröss, Nándor Faluhelyi, László Földvári-Nagy, Katalin Földváriné Lenti (Supervisor of the month: **August 2023**), Krisztina Hagymási, Péter Hegyi, Péter Jenő Hegyi, Nóra Hosszúfalusi, István Hritz, Márk Félix Juhász, Vasile Liviu, Katalin Márta, Emese Mihály (Supervisor of the month: **May 2023**), Pál Miheller, Alexandra Mikó

**AGE**

30 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**László Földvári,  
Katalin Földváriné Lenti**E-MAIL**

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**DÁNIEL STEVE BEDNÁRIK**

HEIM PÁL CHILDREN'S HOSPITAL

**TOPIC**

Gastroenterology - C.Diff

**VISION**

Every patient should have the chance to get the best possible therapies in healthcare against Clostridioides difficile infection.

**MISSION**

Find the best possible therapies in healthcare against Clostridioides difficile infection.

**PUBLISHED ARTICLE(S)****PROJECT 1:** Bednárík DS. et al. (2025) Comparative effectiveness of different therapies for Clostridioides difficile infection in adults: a systematic review and network meta-analysis of randomized controlled trials. *The Lancet Regional Health - Europe*, **D1**, IF: **13.600****SPECIFIC GOALS****PROJECT 1:**

Comparing the effectiveness and safety of different therapies in Clostridioides difficile infection in adults

**PROJECT 2:**

Comparing the effectiveness and safety of different therapies in Clostridioides difficile infection in pediatric patients

**AGE**

30 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**Nándor Faluhelyi,  
Péter Hegyi**E-MAIL**

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**RUBEN ZSOLT BORBÉLY**

BAJCSY-ZSILINSZKY HOSPITAL AND CLINIC

**TOPIC**

Gastroenterology - Radiology

**VISION**

Advance the understanding and treatment of acute pancreatitis.

**MISSION**

Enhance the diagnostic and prognostic value of CT imaging in acute pancreatitis.

**PUBLISHED ARTICLE(S)****PROJECT 1:** Borbély, RZs. et al. (2024) The risk of developing splanchnic vein thrombosis in acute pancreatitis increases 3 days after symptom onset: A systematic review and meta-analysis. *UEG J*, **Q1**, IF: **6.000****PROJECT 2:** Borbély, RZs. et al. (2025) Incidence and Management of Splanchnic Vein Thrombosis in Pancreatic Diseases. *UEG J*, **Q1**, IF: **5.800****SPECIFIC GOALS****PROJECT 1:**

Growing Risk of Splanchnic Vein Thrombosis in the Early Phase of Acute Pancreatitis: a systematic review and meta-analysis

**PROJECT 2:**

Investigating the effect of CT calculated body composition on the outcomes of patients with acute pancreatitis: a retrospective analysis of a clinical trial

**AGE**

28 years

**EDUCATION**

dietitian

**SUPERVISOR(S)**Péter Hegyi,  
Stefania Bunduc**E-MAIL**

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**BETTINA CSILLA BUDAI**

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

**TOPIC**

Gastroenterology - Acute pancreatitis

**VISION**

Nutrition is a corner stone in the multimodal care of all cancer patients.

**MISSION**

To carry out scientific activity to bring innovation in the nutrition therapy of cancer.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the risk factors for malnutrition in patients with gastrointestinal cancer: a systematic review and meta-analysis

**PROJECT 2:**

Investigating the effect of amino acid supplementation in digestive tract cancer patients: a systematic review and meta-analysis



## DIANA ELENA FLORIA

SAINT SPIRIDON EMERGENCY HOSPITAL IASI, ROMANIA



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Bálint Erőss, Vasile Liviu

### E-MAIL

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### TOPIC

Gastroenterology - GERD-PPI

### VISION

To improve the clinical management of patients with Gastro-Esophageal Reflux Disease (GERD).

### MISSION

To assess the efficacy and safety of acid-suppressive drugs.

### SPECIFIC GOALS

#### PROJECT 1:

Therapeutic Effects of Acid-Suppressive Medications in Adults with Non-specific Chronic Cough: Systematic Review and Meta-analysis

#### PROJECT 2:

Risk of Clostridioides difficile Infection in Adults with Treatment with Proton Pump Inhibitors: Systematic Review and Meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Floria, DE. et al. (2024) Systematic review and meta-analysis: proton pump inhibitors slightly decrease the severity of chronic cough. *Sci Rep*, **D1**, IF: **4.600**



## ENDRE BOTOND GAGYI

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Bálint Erőss

### E-MAIL

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### TOPIC

Gastroenterology - Pancreatitis

### VISION

Gaining professional knowledge about the progression of pancreatitis, to identify more patients with early chronic pancreatitis.

### MISSION

To highlight and emphasize the importance and to make better recommendations to patients by understanding the progression of acute pancreatitis into RAP and CP.

### SPECIFIC GOALS

#### PROJECT 1:

The Risk Factors of Acute Pancreatitis Progression into Recurrent Acute Pancreatitis and Chronic Pancreatitis: A Systematic Review and Meta-analysis

#### PROJECT 2:

The Proportion of Chronic Pancreatitis patients without any prior acute pancreatitis episode and the associated factors: A Systematic Review and Meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Gagyí, EG. et al. (2024) Incidence of recurrent and chronic pancreatitis after acute pancreatitis: a systematic review and meta-analysis. *Therap Adv Gastroenterol*, **Q1**, IF: **4.200**



## CAI GEFU

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

26 years

### EDUCATION

biologist

### SUPERVISOR(S)

Péter Hegyi

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### TOPIC

Gastroenterology - Acute pancreatitis

### VISION

Improving the prognosis of acute pancreatitis patients: Less common etiologies.

### MISSION

Explore the effects of virus infection in GI system.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effects of concomitant virus infections on clinical outcomes in acute pancreatitis: a systematic review and meta-analysis

#### PROJECT 2:

Identifying the association between serum lipids and their metabolites and the outcome of COVID-19: a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Gefu, C. et al. (2024) Concomitant virus infection increases mortality and worsens outcome of acute pancreatitis: A systematic review and meta-analysis. *Pancreatol*, **Q1**, IF: **2.800**



## BÁLINT GELLÉRT

DEPARTMENT OF SURGERY, TRANSPLANTATION AND GASTROENTEROLOGY, SEMMELWEIS UNIVERSITY



### AGE

35 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

István Hritz

### E-MAIL

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### TOPIC

Gastroenterology - Pancreaticobiliary

### VISION

Reducing mortality and morbidity related to pancreaticobiliary diseases.

### MISSION

Enhancement of the safety and efficacy of different endoscopic interventions used in the management of pancreaticobiliary disorders.

### SPECIFIC GOALS

#### PROJECT 1:

Understanding the role of different endoscopic retrograde cholangiopancreatography (ERCP) techniques following the Roux-en-Y gastric bypass (RYGB) procedure – systematic review and meta-analysis

#### PROJECT 2:

Improving the endoscopic management of walled-off pancreatic necroses by comparing two treatment strategies – clinical trial

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Gellért, B. et al. (2024) Understanding the Role of Different ERCP Techniques in Post-Roux-en-Y Gastric Bypass Patients: a Systematic Review and Meta-analysis. *Obes Surg*, **Q1**, IF: **2.900**



## JAKUB HOFERICA

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Jenő Hegyi,  
Peter Banovnic

### E-MAIL

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### TOPIC

Gastroenterology - Hepatology

### VISION

To promote evidence-based medicine in gastroenterology.

### MISSION

To better understand risk factors in gastroenterology.

### SPECIFIC GOALS

#### PROJECT 1:

Investigation of chronic liver disease effect on outcomes in acute pancreatitis: Systematic review and meta-analysis

#### PROJECT 2:

Investigating the application of fecal microbiota transplantation in alcoholic hepatitis: Systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Hoferica, J. et al. (2024) Chronic liver disease is an important risk factor for worse outcomes in acute pancreatitis: a systematic review and meta-analysis. *Sci Rep*, **D1**, IF: **4.600**



## SAROLTA BEÁTA KÁVÁSI

TOLDY FERENC HOSPITAL AND CLINIC



### AGE

30 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Szabolcs Ábrahám, Péter Hegyi

### E-MAIL

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### TOPIC

Gastroenterology - Surgery

### VISION

Improve the immediate postoperative and quality of life of patients following colorectal cancer surgery.

### MISSION

Bring the latest scientific data to clinical use in the surgical field.

### SPECIFIC GOALS

#### PROJECT 1:

End-to-end anastomosis provides similar quality-of-life, compared with other reconstructive techniques six months following Total Mesorectal Excision: systematic review and meta-analysis of randomized controlled trials

#### PROJECT 2:

Comparing surgical and oncological outcomes of extra-levator to conventional abdominoperineal excision for low rectal cancer: systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Kávási, SB. et al. (2024) End-to-end anastomosis provides similar quality-of-life, compared with other reconstructive techniques six months following total mesorectal excision: Systematic review and meta-analysis. *Eur J Surg Oncol*, **D1**, IF: **3.800**



## MÓNIKA BERNADETT LIPP

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



### AGE

31 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Péter Hegyi, Alexandra Mikó

### E-MAIL

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### TOPIC

Gastroenterology - Pancreatology

### VISION

Take action on quality of care.

### MISSION

To improve the clinical assessment of patients with pancreatic disorders and metabolic abnormalities.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the effect of the fatty pancreas on the risk of pancreatic cancer: a systematic review and meta-analysis

#### PROJECT 2:

Understanding the role of metabolic changes in disease progression on GOULASH-trial patients following acute pancreatitis: register analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Lipp, MB. et al. (2023) Fatty Pancreas Is a Risk Factor for Pancreatic Cancer: A Systematic Review and Meta-Analysis of 2956 Patients. *Cancers (Basel)*, **Q1**, IF: **5.200**



## PETRANA MARTINEKOVA

CANDENA SLOVAKIA



### AGE

30 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Krisztina Hagymási

### E-MAIL

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### TOPIC

Gastroenterology - Hepatology

### VISION

Improve the care for patients with liver diseases with evidence-based and personalized approach.

### MISSION

Investigate the current evidence of micro and macronutrients in chronic liver diseases and the early detection of bacterial infections in cirrhotic patients.

### SPECIFIC GOALS

#### PROJECT 1:

Comprehensive Analysis of Vitamin-D Supplementation in Patients with Chronic Liver Disease: a Systematic Review and Meta-analysis of Randomized Controlled Trials

#### PROJECT 2:

Diagnostic Accuracy of Biomarkers in Cirrhotic Patients with Bacterial Infections: a Systematic Review and Meta-analysis



## PANAGIOTIS PARASKEVOPOULOS

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Bálint Erőss

### E-MAIL

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### TOPIC

Gastroenterology - Pancreaticobiliary

### VISION

Improve palliation of critically ill patients.

### MISSION

Find a proper idea and implement it properly.

### SPECIFIC GOALS

#### PROJECT 1:

The Addition of Antegrade Stenting in Patients Undergoing Hepaticogastrostomy for Malignant Biliary Obstruction Offers Better Outcomes: A Systematic Review & Meta-Analysis: a systematic review and meta-analysis

#### PROJECT 2:

Efficacy of different EUS-guided biliary drainage techniques

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Paraskevopoulos, P. et al. (2024) Hepaticogastrostomy versus hepaticogastrostomy with antegrade stenting for malignant biliary obstruction: A systematic review and meta-analysis. *Therap Adv Gastroenterol*, **Q1**, IF: **4.200**

**AGE**

49 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Pál Miheller

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## HAJNAL SZÉKELY

DEPARTMENT OF SURGERY, TRANSPLANTATION AND GASTROENTEROLOGY, SEMMELWEIS UNIVERSITY

**TOPIC**

Gastroenterology - IBD

**VISION**

To improve the quality of IBD patient's care.

**MISSION**

Extend the knowledge regarding important clinical aspects of this complex systemic disease.

**PUBLISHED ARTICLE(S)**

**PROJECT 1:** Székely, H. et al. (2023) Anti-tumor necrosis factor alpha versus corticosteroids: A threefold difference in the occurrence of venous thromboembolism in Inflammatory Bowel Disease - a systematic review and meta-analysis. *J Crohns Colitis*, **D1**, IF: **8.000**

**SPECIFIC GOALS****PROJECT 1:**

Anti-tumor necrosis factor-alpha has lower rates of venous thromboembolism than conventional therapy in Inflammatory Bowel Diseases - Systematic review and meta-analysis

**PROJECT 2:**

Comparing tumor necrosis factor-alpha inhibitors with anti-inflammatory IBD therapy on colitis associated colorectal cancer - Systematic review and meta-analysis

**AGE**

27 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Bálint Eröss

**E-MAIL**

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## EDINA TARI

INSTITUTE OF PANCREATIC DISEASES, SEMMELWEIS UNIVERSITY

**TOPIC**

Gastroenterology - Pancreaticobiliary

**VISION**

To improve patient care in acute gastrointestinal diseases.

**MISSION**

To conduct high-quality researches in acute gastrointestinal diseases.

**PUBLISHED ARTICLE(S)**

**PROJECT 1:** Tari, E. et al. (2022) Anaemia Is Associated with an Increased Risk of Fractures, A Systematic Review, and Meta-Analysis. *Gerontology*, **Q1**, IF: **3.500**  
**PROJECT 2:** Tari, E. et al. (2023) At admission hemodynamic instability is associated with increased mortality and rebleeding rate in acute gastrointestinal bleeding: a systematic review and meta-analysis. *Therap Adv Gastroenterol*, **Q1**, IF: **4.200**

**SPECIFIC GOALS****PROJECT 1:**

Morphology of the papilla can predict a higher rate of post-ERCP adverse events: systematic review and meta-analysis

**PROJECT 2:**

Early resuscitation with vasopressor and fluid versus fluid resuscitation alone in hemodynamically unstable patients with acute gastrointestinal bleeding: protocol for a multicentre randomized controlled trial; feasibility trial

**AGE**

28 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Péter Hegyi,  
Alexandra Mikó

**E-MAIL**

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## DOROTTYA TARJÁN

INSTITUTE OF PANCREATIC DISEASES, SEMMELWEIS UNIVERSITY

**TOPIC**

Gastroenterology - Pancreatology

**VISION**

To contribute to clearer guidelines.

**MISSION**

of acute pancreatitis.

**PUBLISHED ARTICLE(S)**

**PROJECT 1:** Tarján, D. et al. (2022) Acute Pancreatitis Severity Prediction: It Is Time to Use Artificial Intelligence. *J Clin Med*, **Q1**, IF: **3.900**  
**PROJECT 2:** Tarján, D. et al. (2024) Persistently High Procalcitonin and C-Reactive Protein Are Good Predictors of Infection in Acute Necrotizing Pancreatitis: A Systematic Review and Meta-Analysis. *Int J Mol Sci*, **D1**, IF: **5.600**

**SPECIFIC GOALS****PROJECT 1:**

Identifying early predictors for infected necrosis in acute pancreatitis: a systematic review and meta-analysis

**PROJECT 2:**

Investigating the safety and effectiveness of cholecystectomy in pregnant women with acute pancreatitis: registry-analysis

**AGE**

28 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Pál Miheller

**E-MAIL**

laura.toth.0504@gmail.com

**LAURA MÁRIA TÓTH**

INSTITUTE OF PANCREATIC DISEASES, SEMMELWEIS UNIVERSITY

**TOPIC**

Gastroenterology - Surgery - IBD

**VISION**

Provide the best achievable therapy to IBD patients.

**MISSION**

Contribute to the clarification of some questionable parts in the surgical care of IBD patients.

**SPECIFIC GOALS****PROJECT 1:**

Comprehensive analyse of the effect of obesity on postoperative complications in UC: Systematic review and meta-analysis

**PROJECT 2:**

Comparison of the hand-sewn anastomosis with stapled in UC patients undergoing colectomy: Systematic review and meta-analysis

**PUBLISHED ARTICLE(S)****PROJECT 1:** Tóth, LM. et al. (2024) Effect of obesity on postoperative complications in ulcerative colitis: A systematic review and meta-analysis *Annals of Gastroenterological Surgery*, **D1**, IF: **2.700****AGE**

34 years

**EDUCATION**

psychologist

**SUPERVISOR(S)**

Péter Hegyi, Katalin Márta

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**ANNA SÁRA BOGNÁR**

INSTITUTE OF PANCREATIC DISEASES, SEMMELWEIS UNIVERSITY

**TOPIC**

Gastroenterology - Psychotherapy

**VISION**

Cancer patients receive personalized psychological support which will increase their quality of life.

**MISSION**

I am committed to implement psychological support in the standard of care from the time of the diagnosis until the end of treatment irrespectively of the outcome of the disease.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the effect of psychological interventions on quality of life and survival in patients with cancer: a systematic review and meta-analysis of RCTs

**PROJECT 2:**

Investigating the degree of psychological burden of patients with pancreatic cancer: a systematic review and meta-analysis

**PUBLISHED ARTICLE(S)****PROJECT 1:** Bognár, AS. et al. (2024) Psychological intervention improves quality of life in patients with early-stage cancer: a systematic review and meta-analysis of randomized clinical trials. *Sci Rep*, **D1**, IF: 4.600**AGE**

29 years

**EDUCATION**

dietitian

**SUPERVISOR(S)**Katalin Földváriné Lenti,  
László Földvári-Nagy**E-MAIL**

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**ANNA JÚLIA ÉLIÁS**

FACULTY OF HEALTH SCIENCES, SEMMELWEIS UNIVERSITY

**TOPIC**

Cardiology - Coronary heart disease

**VISION**

Probiotics - Specification of evidence-based and applicable recommendations, personalised medicine.

**MISSION**

Understand the role of the human gut microbiome in health and disease, consequences of treatments.

**SPECIFIC GOALS****PROJECT 1:**

Probiotic Supplementation During Antibiotic Treatment is Unjustified in Maintaining the Gut Microbiome Diversity- a systematic review and meta-analysis

**PROJECT 2:**

Effects of probiotic supplementation on gut microbiome diversity and composition in healthy population - a systematic review and meta-analysis

**PUBLISHED ARTICLE(S)****PROJECT 1:** Éliás, AJ. et al. (2024) Probiotic supplementation during antibiotic treatment is unjustified in maintaining the gut microbiome diversity: a systematic review and meta-analysis. *BMC Med*, **Q1**, IF: **11.150**



## MARIE ANNE ENGH

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Bálint Eröss

### E-MAIL

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### TOPIC

Gastroenterology - Diagnostic methods in pancreatic cancer

### VISION

Improved diagnostics of pancreatic cancer that lead to better outcomes for the patients.

### MISSION

Contribute to clearer guidelines for more efficient diagnostics of pancreatic cancer.

### SPECIFIC GOALS

#### PROJECT 1:

Diagnostic adequacy of different needle designs for endoscopic ultrasound guided tissue acquisition of solid pancreatic masses: A systematic review and network meta-analysis

#### PROJECT 2:

Contrast-enhanced EUS likely doesn't increase diagnostic adequacy during tissue acquisition from solid pancreatic masses: A systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Engh, MA et al. (2024) Contrast-enhanced endoscopic ultrasound likely does not improve diagnostic adequacy during endoscopic ultrasound guided tissue acquisition: A systematic review and meta-analysis. *Pancreatology*, **Q1**, IF: **3.600**



## ADRIENN NIKOLETT KOVÁCS

DEPARTMENT OF INTERNAL MEDICINE AND HAEMATOLOGY, SEMMELWEIS UNIVERSITY



### AGE

31 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Nóra Hosszúfalusi

### E-MAIL

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### TOPIC

Gastroenterology - Diabetes mellitus

### VISION

Decrease unnecessary insulin administration in ketosis-prone type 2 diabetes mellitus.

### MISSION

Increase awareness about ketosis-prone type 2 diabetes and improve its management.

### SPECIFIC GOALS

#### PROJECT 1:

Prevalence and clinical characteristics of ketosis-prone type 2 diabetes among patients with diabetic ketoacidosis: meta-analysis

#### PROJECT 2:

Long-term follow-up of Hungarian patients with new-onset diabetic ketoacidosis: cohort analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Kovács, AN. et al. (2023) One third of cases of new-onset diabetic ketosis in adults are associated with ketosis-prone type 2 diabetes - A systematic review and meta-analysis. *Diabetes Metab Res Rev*, **D1**, IF: **8.000**



## MAHMOUD OBEIDAT

INSTITUTE FOR TRANSLATIONAL MEDICINE, UNIVERSITY OF PÉCS



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Bálint Eröss

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### TOPIC

Gastroenterology - Gastrointestinal bleeding

### VISION

Improve the care and outcomes for gastrointestinal bleeding patients (guideline-based treatment).

### MISSION

To investigate the proportion and pre-endoscopic assessment of hemodynamically unstable GIB patients and the efficacy of early nutrition after UGIB.

### SPECIFIC GOALS

#### PROJECT 1:

One in Four Patients with Gastrointestinal Bleeding Develops Shock or Hemodynamic Instability: Systematic Review and Meta-Analysis

#### PROJECT 2:

Early nutrition is safe and does not increase complications after upper gastrointestinal bleeding-a systematic review and meta-analysis of randomized controlled trials

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Obeidat, M. et al. (2023) One in four patients with gastrointestinal bleeding develops shock or hemodynamic instability: A systematic review and meta-analysis. *World J Gastroenterol*, **Q1**, IF: **4.300**

**PROJECT 2:** Obeidat, M. et al. (2024) Early nutrition is safe and does not increase complications after upper gastrointestinal bleeding- A systematic review and meta-analysis of randomized controlled trials. *Sci Rep*, **D1**, IF: **4.600**



## DÁNIEL PÁLINKÁS

DEPARTMENT OF GASTROENTEROLOGY,  
HUNGARIAN ARMY MEDICAL CENTRE



### AGE

37 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Bálint Eröss

### E-MAIL

dr.d.palinkas@gmail.com

### TOPIC

Gastroenterology - Gastrointestinal bleeding

### VISION

Improve the management of gastrointestinal bleeding patients.

### MISSION

Find the best way of anticoagulation resumption after GIB.

### SPECIFIC GOALS

#### PROJECT 1:

No association between gastrointestinal rebleeding and DOAC therapy resumption: a systematic review and meta-analysis

#### PROJECT 2:

Consequences of restarting anticoagulation after GIB: cohort analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Pálincás, D. et al. (2023) No Association between Gastrointestinal Rebleeding and DOAC Therapy Resumption: A Systematic Review and Meta-Analysis. *Biomedicines*, **Q1**, IF: **4.700**



## ANETT RANCZ

CENTRE FOR TRANSLATIONAL MEDICINE, SEMMELWEIS UNIVERSITY



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Emese Mihály

### E-MAIL

ranczanett@gmail.com

### TOPIC

Gastroenterology - Microscopic colitis

### VISION

Vigilant physicians who educate patients to prevent the development of the disease – microscopic colitis.

### MISSION

Provide professional knowledge to the physicians about the clinically relevant risk factors for microscopic colitis.

### SPECIFIC GOALS

#### PROJECT 1:

Microscopic colitis is a risk factor for low bone density: a systematic review and meta-analysis

#### PROJECT 2:

Risk factors for microscopic colitis: a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Rancz, A. et al. (2023) Microscopic colitis is a risk factor for low bone density: A systematic review and meta-analysis. *Therap Adv Gastroenterol*, **Q1**, IF: **4.802**



## OLGA JULIA ZAHARIEV

INSTITUTE OF PANCREATIC DISEASES, SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

dietitian

### SUPERVISOR(S)

Péter Hegyi,  
Márk Félix Juhász

### E-MAIL

olga.zahariev@gmail.com

### TOPIC

Gastroenterology - Diabetes mellitus

### VISION

A world where preventable diabetes mellitus is prevented.

### MISSION

Shift health policy towards prevention and educate patients.

### SPECIFIC GOALS

#### PROJECT 1:

Identifying patients at risk of developing diabetes after acute pancreatitis: a prognostic meta-analysis

#### PROJECT 2:

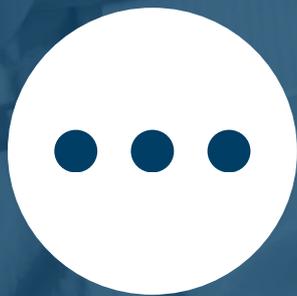
The EFFect Of dietary fat content on the Recurrence of pancreaTitis (EFFORT): multicenter randomised controlled trial

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Zahariev, OJ. et al. (2024) Risk factors for diabetes mellitus after acute pancreatitis: A systematic review and meta-analysis. *Front Med (Lausanne)*, **Q1**, IF: **3.900**

A blue-tinted photograph of medical students in a classroom. Two women in the foreground are smiling and looking at each other. One is holding a clipboard. In the background, a large anatomical model of a human spine is visible on a table. The overall scene is educational and collaborative.

GROUP 7  
**ORTHO-NEURO-  
MISC**





# GROUP 7 ORTHO-NEURO-MISC



## INTRODUCTION TO THE GROUP

The Ortho-Neuro-Miscellaneous research group consists of 4 third-year and 15 fourth-year students, guided by 4 Scientific Methodology Supervisors and supported by 18 clinical supervisors. This group covers a diverse range of topics across orthopedic and neurological fields, such as knee surgery, foot and ankle surgery, consciousness studies, orthopedics, developmental hip dysplasia, multiple sclerosis, middle ear surgery, and diagnostic investigations of wrist and hand conditions. Students are engaged in a variety of research types, primarily meta-analyses, but also including clinical trial protocols, registry analysis, surveys, and ongoing clinical trials. This multidisciplinary structure provides a robust platform for collaboration, advancing research across orthopedics, neurology, and related areas.

## MEMBERS OF THE GROUP

**RITA NAGY**  
Group Leader  
07/23

**MARIE ANNE ENGH**  
Group Leader  
12/21  
07/23  
11/23

**SZILÁRD VÁNCSA**  
Scientific Methodology Supervisor  
08/23

**ALEXANDER S. WENNING**  
Scientific Methodology Supervisor  
01/23  
10/23

**MAHMOUD OBEIDAT**  
Scientific Methodology Supervisor  
07/23  
11/22  
09/23  
03/24

### STUDENTS:

**Year III:** György Gulácsi, Klára Borbála Körmendy, Orsolya Lányi, Danuta Szirmai /

**Year IV:** 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, Gábor Csukly (Supervisory of the month: **August 2022**), György Márk Hangody, László Hangody, Judit Réka Hetthéssy, Gergely Holnapy, András Horváth (Supervisor of the month: **August 2023**), Tamás Horváth (Supervisor of the month: **September 2022**), György Kocsis, Károly Pap, Gergely Pánics, Gábor Skaliczki, Miklós Szendrői, György Szőke

**AGE**

38 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Miklós Szendrői

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**GYÖRGY GULÁCSI**

DEPARTMENT OF RADIOLOGY, SEMMELWEIS UNIVERSITY

**TOPIC**

Radiology - Orthopedics

**VISION**

To provide state-of-the-art diagnostic care for patients with bone and soft tissue tumors.

**MISSION**

To determine the optimal imaging algorithm of chondrogenic bone tumors that can eventuate higher clinical decision-making efficacy.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the diagnostic accuracy of advanced MRI techniques in patients with cartilage forming bone tumors. Systematic review and meta-analysis

**PROJECT 2:**

Comparing the diagnostic accuracy of conventional MRI assessment and radiomical MRI features for the distinction between enchondroma and atypical chondroid tumor. Retrospective diagnostic test study

**AGE**

27 years

**EDUCATION**

medical doctor

**SUPERVISOR(S)**

Tamás Horváth

**E-MAIL**

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**KLÁRA BORBÁLA KÖRMENDY**

BAJCSY-ZSILINSZKY HOSPITAL AND CLINIC

**TOPIC**

Otorhinolaryngology - Middle ear surgery

**VISION**

Lower cholesteatoma recidivism.

**MISSION**

Investigating currently used staging systems and follow-up methods.

**SPECIFIC GOALS****PROJECT 1:**

Investigating the validity of the Potsic congenital cholesteatoma staging system: a systematic review and meta-analysis

**PROJECT 2:**

Assessing the rate of recidivism according to EAONO/JOS\* cholesteatoma staging system: a systematic review and meta-analysis

**PUBLISHED ARTICLE(S)****PROJECT 1:** Körmendy, KB. et al. (2024) Predicting residual cholesteatoma with the Potsic staging system still lacks evidence: a systematic review and meta-analysis. *Eur Arch Otorhinolaryngol*, **Q1**, **IF: 2.600****AGE**

27 years

**EDUCATION**

psychologist

**SUPERVISOR(S)**

Gábor Csukly

**E-MAIL**

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**ORSOLYA LÁNYI**

DEPARTMENT OF PSYCHIATRY AND PSYCHOTHERAPY, SEMMELWEIS UNIVERSITY

**TOPIC**

Neuropsychiatry - Schizophrenia

**VISION**

Understanding the biological background of schizophrenia-spectrum disorders.

**MISSION**

To study the potential neurophysiological and neuroimaging characteristics of schizophrenia.

**SPECIFIC GOALS****PROJECT 1:**

Investigating motor cortical TMS-EMG protocols as new biomarkers for schizophrenia: a systematic review and meta-analysis

**PROJECT 2:**

Investigating thalamocortical connectivity with resting-state fMRI in schizophrenia: a systematic review and meta-analysis

**PUBLISHED ARTICLE(S)****PROJECT 1:** Lányi, O. et al. (2024) Excitation/inhibition imbalance in schizophrenia: A meta-analysis of inhibitory and excitatory TMS-EMG paradigms. *Schizophrenia (Heidelb)*, **D1**, **IF: 5.400**



## DANUTA SZIRMAI

NATIONAL INSTITUTE OF MENTAL HEALTH, NEUROLOGY AND NEUROSURGERY



### AGE

31 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

András Horváth

### E-MAIL

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### TOPIC

Neuropsychiatry - Consciousness

### VISION

To provide the best care for patients in coma.

### MISSION

Bringing research closer to clinical practice.

### SPECIFIC GOALS

#### PROJECT 1:

Assessing the prognostic power of EEG connectivity measures in patients with disorders of consciousness

#### PROJECT 2:

Assessing the prognostic power of EEG measures in patients with disorders of consciousness

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Szirmai, D. et al. (2024) EEG connectivity and network analyses predict outcome in patients with disorders of consciousness – A systematic review and meta-analysis. *Heliyon*, **Q1**, IF: **4.000**

YEAR IV.



## ROBERT DE JONGE

DEPARTMENT OF TRAUMATOLOGY, SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Gergely Pánics,  
László Hangody

### E-MAIL

dejongerobi@gmail.com

### TOPIC

Orthopedics, traumatology - Knee surgery

### VISION

Understand the nature of sports injuries. Provide better care and life quality for knee injured patients.

### MISSION

Resolve disagreements and controversies of anterior cruciate ligament injury and therapy.

### SPECIFIC GOALS

#### PROJECT 1:

Non-operative Treatment is an Effective Option for Isolated Anterior Cruciate Ligament Injuries: a systematic review and meta-analysis

#### PROJECT 2:

Comparing the Outcomes of Reconstruction Alone and Combined with Anterolateral Extra-Articular Procedures in the Treatment of Anterior Cruciate Ligament Injury: a systematic review and network meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** de Jonge, R. et al. (2024) Nonoperative Treatment as an Option for Isolated Anterior Cruciate Ligament Injury: A Systematic Review and Meta-analysis. *Orthop J Sports Med*, **Q1**, IF: **2.600**



## GYULA DOMOS

DEPARTMENT OF ORTHOPAEDICS, SEMMELWEIS UNIVERSITY



### AGE

46 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

György Szőke

### E-MAIL

domosgy@gmail.com

### TOPIC

Orthopedics, traumatology - Developmental hip dysplasia

### VISION

To ensure the highest quality treatment for pediatric patients and to build one of the best pediatric orthopaedic centers in Europe.

### MISSION

To introduce the best available treatment methods in every field of pediatric orthopaedics, to work out new treatment protocols.

### SPECIFIC GOALS

#### PROJECT 1:

Identifying the risk factors of failure in the treatment of congenital hip dislocation a systematic review and meta-analysis

#### PROJECT 2:

The results of primary complex surgical treatment in congenital hip dislocation retrospective cohort analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Domos, Gy. et al. (2024) Rates and risk factors for failure of reduction in closed reduction in developmental dysplasia of the hip: A systematic review and meta-analysis. *Effort Open Rev*, **D1**, IF: **3.400**



## LUCA HERGÁR

DEPARTMENT OF ORTHOPAEDICS, SEMMELWEIS UNIVERSITY



### AGE

28 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Judit Réka Hetthéssy

### E-MAIL

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### TOPIC

Orthopedics, traumatology - Diagnostic investigations of wrist and hand conditions

### VISION

Adequate diagnosis at the first doctor-patient interaction.

### MISSION

To evaluate the accuracy of diagnostic methods in hand surgery.

### SPECIFIC GOALS

#### PROJECT 1:

Investigating the diagnostic accuracy of magnetic resonance imaging for lesions around the wrist: a systematic review and meta-analysis

#### PROJECT 2:

Correlation of two-point discrimination and electroneurography in carpal tunnel syndrome: registry analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Hergár, L. et al. (2024) No evidence for the superiority of 3 T MRI over 1.5 T MRI for diagnosing wrist ligamentous lesions: a systematic review and meta-analysis.

*Arthroscopy*, **D1**, IF: **4.700**

**PROJECT 2:** Hergár, L. et al. (2024) Assessing the severity of carpal tunnel syndrome during physical examination by measuring two-point discrimination: Post-hoc analysis of prospectively collected data. *Injury*, **Q1**, IF: **2.500**



## KOPPÁNY PÉTER KOCSIS

DEPARTMENT OF TRAUMATOLOGY, SEMMELWEIS UNIVERSITY



### AGE

39 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Károly Pap

### E-MAIL

koppány.kocsis@gmail.com

### TOPIC

Orthopedics, traumatology - Diagnosis of ankle injuries

### VISION

Faster and more accurate diagnosis for the ligament injured patients.

### MISSION

Learn, overview the literature and get practise in MSK US.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the diagnostic accuracy of ultrasound and MRI assessing lateral ankle ligament injury: a systematic review and meta-analysis

#### PROJECT 2:

Comparing the diagnostic accuracy of ultrasound and MRI assessing medial collateral injury of the knee: cohort study

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Kocsis, KP. et al. (2024) Diagnostic accuracy of ultrasonography in acute lateral ankle ligament injury: A systematic review and meta-analysis.

*Injury*, **D1**, IF: **2.500**



## KRISZTIÁN BALÁZS KOVÁCS

DEPARTMENT OF ORTHOPAEDICS, SEMMELWEIS UNIVERSITY



### AGE

35 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

György Kocsis

### E-MAIL

dr.kovacs.ortop@gmail.com

### TOPIC

Orthopedics, traumatology - Young's modulus of the bone

### VISION

Make brand-new custom-made implants and designs by updated understanding of bone behavior and linking it with everyday orthopedics service.

### MISSION

As part of an orthopedics team, we are providing cutting edge orthopedic service, based on evidence-based medicine and research.

### SPECIFIC GOALS

#### PROJECT 1:

The impact of different factors influencing the accuracy of in vitro Young's moduli results: a systematic review and meta-analysis

#### PROJECT 2:

Comparing the safety and efficacy of LockDown technique to other approaches in acromioclavicular instability: retrospective cohort study with systematic review

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Kovács, KB. et al. (2023) Anisotropy, Anatomical Region, and Additional Variables Influence Young's Modulus of Bone: A Systematic Review and Meta-Analysis. *JBMR Plus*, **Q1**, IF: **3.800**



## MIKLÓS MÁTÉ

DEPARTMENT OF TRAUMATOLOGY, SEMMELWEIS UNIVERSITY



### AGE

31 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Gergely Pánics,  
László Hangody

### E-MAIL

drmatemiklos@gmail.com

### TOPIC

Orthopedics, traumatology - Knee surgery

### VISION

To bring along and also develop our center which is already well known for cartilage care and repairment.

### MISSION

To help decision-making for daily practice, to have more clear picture about post traumatic osteoarthritis.

### SPECIFIC GOALS

#### PROJECT 1:

No Significant Difference in Signs of Osteoarthritis after Anterior Cruciate Ligament Injuries comparing Surgical and Conservative Treatment: a systematic review and meta-analysis

#### PROJECT 2:

The Role of Anterior Cruciate Ligament Reconstruction in the Development of Osteoarthritis in Less Than 5 Years and After 10 Years. Retrospective X-ray follow-up study



## BENCE STUBNYA

DEPARTMENT OF ORTHOPAEDICS, SEMMELWEIS UNIVERSITY



### AGE

29 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Zoltán Bajek

### E-MAIL

bence@stubnya.hu

### TOPIC

Orthopedics, traumatology - Knee surgery

### VISION

My Vision is if I become a good knee surgeon, I will increase life quality via TKA.

### MISSION

Our Mission is to find the most effective approach for TKA.

### SPECIFIC GOALS

#### PROJECT 1:

Comparison of the safety and efficacy of different surgical approaches in total knee arthroplasty: a systematic review and meta-analysis

#### PROJECT 2:

Comparison of the safety and efficacy of subvastus and medial parapatellar approaches in total knee arthroplasty: observational clinical trial

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Stubnya, B. et al. (2023) Subvastus approach supporting fast-track total knee arthroplasty over the medial parapatellar approach: A systematic review and network meta-analysis. *J Arthroplasty*, **D1**, IF: **4.435**



## GYULA FERENC SZÓCS

DEPARTMENT OF TRAUMATOLOGY, SEMMELWEIS UNIVERSITY



### AGE

33 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

György Márk Hangody

### E-MAIL

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### TOPIC

Orthopedics, traumatology - Knee surgery

### VISION

Decrease the number of total knee arthroplasties in Hungary.

### MISSION

Increase the use of knee cartilage preserving practices.

### SPECIFIC GOALS

#### PROJECT 1:

Comparing the safety and efficacy of meniscal repair and meniscectomy during anterior cruciate ligament reconstruction: a systematic review and meta-analysis

#### PROJECT 2:

Investigating the safety and efficacy of intra-articular injections in the treatment of knee osteoarthritis: a systematic review and network meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Szócs, GYF. et al. (2023) Does concomitant meniscus repair and meniscectomy show different efficacy in anterior cruciate ligament reconstruction? A systematic review and meta-analysis. *Journal of Orthopaedic Translation*, **Q1**, IF: **6.600**



## CSABA VARGA

DEPARTMENT OF ORTHOPAEDICS, SEMMELWEIS UNIVERSITY



### AGE

37 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Gergely Holnapy

### E-MAIL

dr.vargacsaba001@gmail.com

### TOPIC

Orthopedics, traumatology - Foot and ankle surgery

### VISION

A high-quality up to date professional foot surgery in Hungary.

### MISSION

To avoid the unappropriate surgical interventions in foot surgery practice.

### SPECIFIC GOALS

#### PROJECT 1:

Obesity increases the odds of ankle prosthesis revision: a systematic review and meta-analysis

#### PROJECT 2:

Comparison of operative techniques for the treatment of adult flatfoot in different stages: a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Varga, Cs. et al. (2023) Obesity and Ankle Prosthesis Revision: A Systematic Review and Meta-analysis. *Foot Ankle Int*, **D1**, IF: **2.700**



## VIKTOR WENINGER

DEPARTMENT OF ORTHOPAEDICS, SEMMELWEIS UNIVERSITY



### AGE

30 years

### EDUCATION

medical doctor

### SUPERVISOR(S)

Gábor Skaliczki

### E-MAIL

weningerviktor@yahoo.com

### TOPIC

Orthopedics, traumatology - Shoulder surgery

### VISION

Use fewer steroid injections in our practice and reduce the C. acnes culture with effective skin preparation.

### MISSION

A fewer side effects in patients thanks to fewer steroids, and less frequent surgical site infection due to less C. acnes germ.

### SPECIFIC GOALS

#### PROJECT 1:

Hyaluronate and its combinations are superior to steroids in the injection therapy of Partial Rotator Cuff Tear: a systematic review and meta-analysis

#### PROJECT 2:

Peroxide skin preparation reduce the incidence of Cutibacterium acnes in skin around the shoulder joint : a systematic review and meta-analysis

### PUBLISHED ARTICLE(S)

**PROJECT 1:** Weninger, V. et al. (2024) Hyaluronate acid plus platelet-rich plasma is superior to steroids for pain relief less than 6 months using injection therapy of partial rotator cuff tears: A systematic review and network meta-analysis. *Arthroscopy*, **D1**, IF: **4.700**



# DEFENDED

## PHD STUDENTS

Following the launch of TM in Hungary in 2016, **50 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>		D1: 0	Cumulative IF: 64,066	
	University:	University of Pécs	Q1: 20	First author IF: 12,32	
	Type of PhD:	inside	Q2: 2		
	Date of dissertation:	2019	Q3: 0		
	No. of articles:	22	Q4: 0		
2	<b>ADRIENN ERŐS</b>		D1: 0	Cumulative IF: 28,362	
	University:	University of Pécs	Q1: 7	First author IF: 11,204	
	Type of PhD:	inside	Q2: 3		
	Date of dissertation:	2020	Q3: 0		
	No. of articles:	10	Q4: 0		
3	<b>ZSOLT SZAKÁCS</b>		D1: 3	Cumulative IF: 160,303	
	University:	University of Pécs	Q1: 29	First author IF: 37,102	
	Type of PhD:	inside	Q2: 11		
	Date of dissertation:	2021	Q3: 4		
	No. of articles:	48	Q4: 0		
4	<b>DÁNIEL PÉCSI</b>		D1: 0	Cumulative IF: 97,146	
	University:	University of Pécs	Q1: 22	First author IF: 16,324	
	Type of PhD:	inside	Q2: 6		
	Date of dissertation:	2021	Q3: 1		
	No. of articles:	32	Q4: 0		
5	<b>PÉTER VARJÚ</b>		D1: 1	Cumulative IF: 61,477	
	University:	University of Pécs	Q1: 15	First author IF: 9,909	
	Type of PhD:	inside	Q2: 2		
	Date of dissertation:	2022	Q3: 2		
	No. of articles:	20	Q4: 0		
6	<b>PATRIK KÉRINGER</b>		D1: 1	Cumulative IF: 42,869	
	University:	University of Pécs	Q1: 5	First author IF: 8,69	
	Type of PhD:	inside	Q2: 1		
	Date of dissertation:	2022	Q3: 0		
	No. of articles:	9	Q4: 0		

7	<b>KLEMENTINA OCSKAY</b>		D1: 6	Cumulative IF: 106,091	
	University:	University of Pécs	Q1: 15	First author IF: 25,164	
	Type of PhD:	inside	Q2: 2		
	Date of dissertation:	2022	Q3: 0		
	No. of articles:	23	Q4: 0		
8	<b>ORSOLYA HUSZÁR</b>		D1: 1	Cumulative IF: 21,459	
	University:	Semmelweis University	Q1: 4	First author IF: 4,39	
	Type of PhD:	outside	Q2: 0		
	Date of dissertation:	2020	Q3: 1		
	No. of articles:	11	Q4: 1		
9	<b>ÁGNES LILLA SZILÁGYI</b>		D1: 1	Cumulative IF: 26,482	
	University:	University of Szeged	Q1: 4	First author IF: 3,411	
	Type of PhD:	outside	Q2: 2		
	Date of dissertation:	2021	Q3: 0		
	No. of articles:	8	Q4: 0		
10	<b>PÉTER KUPÓ</b>		D1: 0	Cumulative IF: 19,302	
	University:	University of Pécs	Q1: 3	First author IF: 8,4	
	Type of PhD:	outside	Q2: 5		
	Date of dissertation:	2021	Q3: 0		
	No. of articles:	12	Q4: 4		
11	<b>ANNA FÁBIÁN</b>		D1: 0	Cumulative IF: 88,759	
	University:	University of Szeged	Q1: 16	First author IF: 17,294	
	Type of PhD:	outside	Q2: 6		
	Date of dissertation:	2021	Q3: 2		
	No. of articles:	34	Q4: 8		
12	<b>BÁLINT TRIMMEL</b>		D1: 1	Cumulative IF: 20,354	
	University:	Semmelweis University	Q1: 3	First author IF: 9,6	
	Type of PhD:	outside	Q2: 2		
	Date of dissertation:	2021	Q3: 0		
	No. of articles:	6	Q4: 0		
13	<b>ANIKÓ NAGY</b>		D1: 1	Cumulative IF: 11,385	
	University:	University of Szeged	Q1: 3	First author IF: 3,799	
	Type of PhD:	outside	Q2: 3		
	Date of dissertation:	2021	Q3: 1		
	No. of articles:	8	Q4: 0		

14	<b>ADRIENN HALÁSZ</b>	D1: 0	Cumulative IF: 38,862	
	University: University of Szeged	Q1: 7	First author IF: 3,57	
	Type of PhD: outside	Q2: 6		
	Date of dissertation: 2022	Q3: 0		
	No. of articles: 13	Q4: 0		
15	<b>ALEXANDRA BÁLINT</b>	D1: 2	Cumulative IF: 29,444	
	University: University of Pécs	Q1: 4	First author IF: 13,154	
	Type of PhD: outside	Q2: 4		
	Date of dissertation: 2022	Q3: 0		
	No. of articles: 11	Q4: 0		
16	<b>ALEXANDRA DEMCSÁK</b>	D1: 0	Cumulative IF: 24,267	
	University: University of Szeged	Q1: 6	First author IF: 10,828	
	Type of PhD: outside	Q2: 1		
	Date of dissertation: 2021	Q3: 0		
	No. of articles: 9	Q4: 0		
17	<b>SZILÁRD GÓDI</b>	D1: 0	Cumulative IF: 52,075	
	University: University of Pécs	Q1: 12	First author IF: 2,063	
	Type of PhD: outside	Q2: 6		
	Date of dissertation: 2021	Q3: 2		
	No. of articles: 20	Q4: 0		
18	<b>SANG-NGOEN THANYAPORN</b>	D1: 0	Cumulative IF: 20,001	
	University: Semmelweis University	Q1: 3	First author IF: 5,811	
	Type of PhD: outside	Q2: 2		
	Date of dissertation: 2022	Q3: 0		
	No. of articles: 6	Q4: 1		
19	<b>SADAENG WUTTAPON</b>	D1: 0	Cumulative IF: 16,393	
	University: Semmelweis University	Q1: 3	First author IF: 3,116	
	Type of PhD: outside	Q2: 1		
	Date of dissertation: 2022	Q3: 0		
	No. of articles: 4	Q4: 0		
20	<b>BÁLINT ERŐSS</b>	D1: 3	Cumulative IF: 100,529	
	University: University of Pécs	Q1: 15	First author IF: 6,389	
	Type of PhD: outside	Q2: 11		
	Date of dissertation: 2020	Q3: 0		
	No. of articles: 70	Q4: 0		

21	<b>DÓRA MOSZTBACHER</b>		D1: 0	Cumulative IF: 45,799	
	University:	University of Szeged	Q1: 11	First author IF: 14,556	
	Type of PhD:	outside	Q2: 3		
	Date of dissertation:	2020	Q3: 0		
	No. of articles:	14	Q4: 0		
22	<b>JUDIT BAJOR</b>		D1: 0	Cumulative IF: 102,787	
	University:	University of Pécs	Q1: 18	First author IF: 7,244	
	Type of PhD:	outside	Q2: 11		
	Date of dissertation:	2020	Q3: 4		
	No. of articles:	183	Q4: 1		
23	<b>ROLAND HÁGENDORN</b>		D1: 0	Cumulative IF: 29,546	
	University:	University of Szeged	Q1: 7	First author IF: 6,969	
	Type of PhD:	outside	Q2: 2		
	Date of dissertation:	2020	Q3: 0		
	No. of articles:	9	Q4: 0		
24	<b>ESZTER GARAMINÉ PÁKAI</b>		D1: 0	Cumulative IF: 59,865	
	University:	University of Szeged	Q1: 12	First author IF: 11,011	
	Type of PhD:	outside	Q2: 2		
	Date of dissertation:	2020	Q3: 0		
	No. of articles:	14	Q4: 0		
25	<b>EMÓKE PÓTÓNÉ OLÁH</b>		D1: 0	Cumulative IF: 37,435	
	University:	University of Pécs	Q1: 6	First author IF: 14,886	
	Type of PhD:	outside	Q2: 2		
	Date of dissertation:	2022	Q3: 0		
	No. of articles:	20	Q4: 0		
26	<b>ZSÓFIA GABRIELLA PESEI</b>		D1: 1	Cumulative IF: 16,808	
	University:	University of Szeged	Q1: 1	First author IF: 12,26	
	Type of PhD:	outside	Q2: 0		
	Date of dissertation:	2023	Q3: 2		
	No. of articles:	4	Q4: 0		
27	<b>DÓRA DOHOS</b>		D1: 1	Cumulative IF: 47,928	
	University:	University of Pécs	Q1: 8	First author IF: 19,978	
	Type of PhD:	inside	Q2: 2		
	Date of dissertation:	2023	Q3: 1		
	No. of articles:	14	Q4: 0		

28	<b>MÁRK FÉLIX JUHÁSZ</b>		D1: 3	Cumulative IF: 66,707	
	University:	University of Pécs	Q1: 13	First author IF: 14,777	
	Type of PhD:	inside	Q2: 1		
	Date of dissertation:	2023	Q3: 0		
	No. of articles:	17	Q4: 0		
29	<b>ABA TAMÁS LŐRINCZ</b>		D1: 0	Cumulative IF: 17,799	
	University:	University of Pécs	Q1: 1	First author IF: 8,61	
	Type of PhD:	inside	Q2: 5		
	Date of dissertation:	2023	Q3: 1		
	No. of articles:	9	Q4: 0		
30	<b>RITA NAGY</b>		D1: 9	Cumulative IF: 132,0	
	University:	University of Pécs	Q1: 6	First author IF: 23,0	
	Type of PhD:	inside	Q2: 0		
	Date of dissertation:	2023	Q3: 0		
	No. of articles:	15	Q4: 0		
31	<b>LAJOS SZAKÓ</b>		D1: 0	Cumulative IF: 30,297	
	University:	University of Pécs	Q1: 9	First author IF: 7.973	
	Type of PhD:	inside	Q2: 0		
	Date of dissertation:	2023	Q3: 0		
	No. of articles:	9	Q4: 0		
32	<b>SZILÁRD VÁNCSA</b>		D1: 13	Cumulative IF: 257,651	
	University:	University of Pécs	Q1: 29	First author IF: 31,269	
	Type of PhD:	inside	Q2: 3		
	Date of dissertation:	2023	Q3: 0		
	No. of articles:	47	Q4: 1		
33	<b>NOÉMI ZÁDORI</b>		D1: 2	Cumulative IF: 16,808	
	University:	University of Pécs	Q1: 15	First author IF: 12,26	
	Type of PhD:	inside	Q2: 3		
	Date of dissertation:	2023	Q3: 0		
	No. of articles:	20	Q4: 2		
34	<b>ÁGNES RITA MARTONOSI</b>		D1: 2	Cumulative IF: 25,409	
	University:	University of Szeged	Q1: 2	First author IF: 8,76	
	Type of PhD:	inside	Q2: 2		
	Date of dissertation:	2023	Q3: 2		
	No. of articles:	10	Q4: 0		

35	<b>ANNA NÓRA KANJO</b>		D1: 2	Cumulative IF: 22,265	
	University:	University of Szeged	Q1: 3	First author IF: 8,003	
	Type of PhD:	inside	Q2: 0		
	Date of dissertation:	2023	Q3: 0		
	No. of articles:	5	Q4: 0		
36	<b>SZABOLCS KISS</b>		D1: 17	Cumulative IF: 252,571	
	University:	University of Szeged	Q1: 28	First author IF: 20,765	
	Type of PhD:	inside	Q2: 7		
	Date of dissertation:	2023	Q3: 0		
	No. of articles:	52	Q4: 0		
37	<b>MÁRIA FÖLDI</b>		D1: 8	Cumulative IF: 71,513	
	University:	University of Szeged	Q1: 4	First author IF: 25,641	
	Type of PhD:	inside	Q2: 2		
	Date of dissertation:	2023	Q3: 0		
	No. of articles:	14	Q4: 0		
38	<b>FANNI ADÉL MEZNERICS</b>		D1: 2	Cumulative IF: 26,200	
	University:	Semmelweis University	Q1: 3	First author IF: 14,100	
	Type of PhD:	inside	Q2: 5		
	Date of dissertation:	2023	Q3: 0		
	No. of articles:	13	Q4: 0		
39	<b>LUCA TÓTH</b>		D1: -	Cumulative IF: 59,629	
	University:	University of Pécs	Q1: -	First author IF: 19,666	
	Type of PhD:	outside	Q2: -		
	Date of dissertation:	2023	Q3: -		
	No. of articles:	14	Q4: -		
40	<b>LÁSZLÓ MÁRK CZUMBEL</b>		D1: 9	Cumulative IF: 78,397	
	University:	Semmelweis University	Q1: 10	First author IF: 9,400	
	Type of PhD:	outside	Q2: 3		
	Date of dissertation:	2023	Q3: 0		
	No. of articles:	22	Q4: 0		
41	<b>ESZTER ÁGNES SZALAI</b>		D1: 1	Cumulative IF: 27,707	
	University:	Semmelweis University	Q1: 5	First author IF: 7,300	
	Type of PhD:	inside	Q2: 1		
	Date of dissertation:	2024	Q3: 0		
	No. of articles:	7	Q4: 0		

42	<b>CANER TURAN</b>		D1: 3	Cumulative IF: 54,600	
	University:	Semmelweis University	Q1: 6	First author IF: 8,600	
	Type of PhD:	inside	Q2: 0		
	Date of dissertation:	2024	Q3: 0		
	No. of articles:	9	Q4: 0		
43	<b>BOGLÁRKA PETHŐ</b>		D1: 2	Cumulative IF: 21,391	
	University:	Semmelweis University	Q1: 2	First author IF: 13,400	
	Type of PhD:	inside	Q2: 0		
	Date of dissertation:	2024	Q3: 1		
	No. of articles:	5	Q4: 0		
44	<b>DORINA GREFF</b>		D1: 3	Cumulative IF: 15,500	
	University:	Semmelweis University	Q1: 0	First author IF: 9,000	
	Type of PhD:	inside	Q2: 0		
	Date of dissertation:	2024	Q3: 0		
	No. of articles:	3	Q4: 0		
45	<b>BALÁZS HAMAR</b>		D1: 1	Cumulative IF: 11,500	
	University:	Semmelweis University	Q1: 2	First author IF: 7,100	
	Type of PhD:	inside	Q2: 0		
	Date of dissertation:	2024	Q3: 0		
	No. of articles:	4	Q4: 1		
46	<b>ALEXANDRA CSENKEY</b>		D1: 1	Cumulative IF: 29,533	
	University:	University of Pécs	Q1: 4	First author IF: 8,596	
	Type of PhD:	outside	Q2: 0		
	Date of dissertation:	2024	Q3: 1		
	No. of articles:	7	Q4: 0		
47	<b>FANNI KESERŰ</b>		D1: 0	Cumulative IF: 7,415	
	University:	University of Szeged	Q1: 1	First author IF: 7,415	
	Type of PhD:	outside	Q2: 1		
	Date of dissertation:	2024	Q3: 0		
	No. of articles:	3	Q4: 1		
48	<b>JÁNOS TOLDI</b>		D1: 2	Cumulative IF: 13,470	
	University:	University of Pécs	Q1: 1	First author IF: 9,596	
	Type of PhD:	outside	Q2: 0		
	Date of dissertation:	2024	Q3: 0		
	No. of articles:	8	Q4: 0		

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**GARMAA GANTSETSEG**

University: Semmelweis University  
Type of PhD: outside  
Date of dissertation: 2024  
No. of articles: 13

D1: 4  
Q1: 6  
Q2: 1  
Q3: 0  
Q4: 1

Cumulative IF: 132,48  
First author IF: 14,400



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**LOTTI LÚCIA KESZTHELYI**

University: Semmelweis University  
Type of PhD: outside  
Date of dissertation: 2024  
No. of articles: 4

D1: 0  
Q1: 1  
Q2: 0  
Q3: 0  
Q4: 3

Cumulative IF: 5,800  
First author IF: 4,600





# 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 career, 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.

## PAST AND UPCOMING LECTURERS

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### OLE HOLGER PETERSEN

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

#### DATE OF THE LECTURE(S)

December 9 (Thursday), 2021

December 15 (Wednesday), 2023

6 December 6 (Friday), 2024

#### 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*

### DATE OF THE LECTURE(S)

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*

### DATE OF THE LECTURE(S)

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*

### DATE OF THE LECTURE(S)

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

*Nobel Prize Laureate Swiss chemist/biophysicist*

### DATE OF THE LECTURE(S)

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

*Nobel Prize Laureate German biophysicist*

### DATE OF THE LECTURE(S)

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*

### DATE OF THE LECTURE(S)

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.*

### **DATE OF THE LECTURE(S)**

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*

### **DATE OF THE LECTURE(S)**

March 24 (Thursday), 2022

December 6 (Friday), 2024

### **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 prestigious 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*

### **DATE OF THE LECTURE(S)**

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*

### **DATE OF THE LECTURE(S)**

March 27 (Monday), 2023

### **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*

### DATE OF THE LECTURE(S)

December 15 (Wednesday), 2023

### 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, neurodegenerative 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

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

### DATE OF THE LECTURE(S)

December 15 (Wednesday), 2023

### 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.



## MARC VAN RANST

*Belgian public health doctor and Professor of Virology at the Katholieke Universiteit Leuven and the Rega Institute for Medical Research*

### DATE OF THE LECTURE(S)

June 14 (Wednesday), 2023

### ABOUT THE LECTURER

Marc Van Ranst is a Belgian public health doctor and Professor of Virology at the Katholieke Universiteit Leuven (Leuven, Belgium) and the Rega Institute for Medical Research. On 1 May 2007, he was appointed as Interministerial commissioner by the Belgian federal government to prepare Belgium for an influenza pandemic. Professor Van Ranst teaches virology and computational genomics at the Faculty of Medicine at the KU Leuven. Since 1995, he holds an affiliate academic position at the Faculty of Natural Sciences at Charles University in Prague, where he teaches Bioinformatics.

In 2020, during the COVID-19 pandemic, Marc Van Ranst became a member both of the Belgian 'Risk Assessment Group' (RAG), which analyses the risks of coronavirus SARS-CoV-2 for public health, and of the 'Scientific committee Coronavirus' which advises Belgian health authorities on combatting the virus and which makes prognoses on its evolution and spread in Belgium. He published over 270 scientific papers in peer reviewed journals and contributed eight chapters to books on molecular evolution and bioinformatics.



## BRIAN KOBILKA

*Nobel Prize Laureate biologist and chemist, Professor in the Department of Molecular and Cellular Physiology at Stanford University School of Medicine, Co-founder of ConfometRx*

### DATE OF THE LECTURE(S)

April 12 (Friday), 2024

### ABOUT THE LECTURER

He received a Bachelor's Degree in Biology and Chemistry from the University of Minnesota Duluth, and earned his M.D., cum laude, from Yale University School of Medicine. Kobilka worked in research as a postdoctoral fellow under Robert Lefkowitz at Duke University, where he started work on cloning the  $\beta$ 2-adrenergic receptor. Kobilka moved to Stanford in 1989. He was a Howard Hughes Medical Institute (HHMI) investigator from 1987 to 2003. He was named a member of the National Academy of Sciences in 2011.

Kobilka is the 1994 recipient of the American Society for Pharmacology and Experimental Therapeutics John J. Abel Award in Pharmacology. His GPCR structure work was named "runner-up" for the 2007 "Breakthrough of the Year" award from Science. The work was, in part, supported by Kobilka's 2004 Javits Neuroscience Investigator Award from the National Institute of Neurological Disorders and Stroke. In 2017, Kobilka received the Golden Plate Award of the American Academy of Achievement. As part of Shenzhen's 13th Five-Year Plan funding research in emerging technologies and opening "Nobel laureate research labs", in 2017 he opened the Kobilka Institute of Innovative Drug Discovery at the CUHK Shenzhen campus in Southern China.



## JOHN EU-LI WONG

*Medical oncologist-haematologist, Senior Vice-President of Health Innovation and Translation at the National University of Singapore*

### DATE OF THE LECTURE(S)

April 12 (Friday), 2024

### ABOUT THE LECTURER

He is actively involved in developing biomedical sciences as a key pillar of Singapore's economy, as well as Singapore's first academic health system between the National University Hospital and NUS. He is also a member of the World Economic Forum Global Agenda Council on Personalized and Precision Medicine; the Nature Index Panel of Senior Medical Advisers; the international editorial board of The American Journal of Medicine; and the editorial board of the Journal of the American Medical Association.

He jointly founded the Cancer Therapeutics Research Group, a multi-national consortium of nine academic institutions, and has served as a member of the International Education Council for Molecular Targeted Therapy for Cancer, the American Society of Clinical Oncology International Affairs Committee, and the International Oncology Foundation advisory board. Also, besides many prestigious award and recognition, he received two Public Administration Medals - a silver and a gold one - at the 2005 and 2006 National Day Awards in Singapore.



## MARTIN CHALFIE

*Nobel Prize Laureate physiologist, former chair of the Department of Biological Sciences at Columbia University*

### DATE OF THE LECTURE(S)

December 6 (Friday), 2024

### ABOUT THE LECTURER

Born in Chicago and raised in Skokie, Illinois, he pursued science at Harvard, earning a Ph.D. in Physiology in 1977. Despite initial doubts about his research abilities, a successful lab experiment reignited his confidence, leading to postdoctoral work with Sydney Brenner at the MRC Laboratory of Molecular Biology in Cambridge, England. In 1982, he joined Columbia as an Assistant Professor.

Dr. Chalfie's groundbreaking research with *Caenorhabditis elegans* helped establish the first genetic model for mechanosensation. His lab has since explored neuronal differentiation, mechanosensory signaling, microtubule function, and the genetic control of neuronal cell fate. He shared the 2008 Nobel Prize in Chemistry for his introduction of Green Fluorescent Protein (GFP) as a biological marker. An esteemed member of the National Academy of Sciences, National Academy of Medicine, and the Royal Society, he also serves as president of the American Society for Cell Biology and chairs the Committee on Human Rights for the National Academies.



# FREE TIME ACTIVITIES



# ACTIVITY CLUBS

## LIFE OUTSIDE OF WORK

Having free time activities outside of work with colleagues is essential for fostering stronger relationships and building team cohesion. When employees interact outside of a work environment, they get the chance to connect on a personal level, beyond the pressures of deadlines and tasks. These informal interactions create opportunities for better communication, trust, and understanding. By engaging in activities such as sports, team-building exercises, or casual social events, colleagues can break down professional barriers and develop a sense of camaraderie that can improve collaboration during work hours. The stronger the personal relationships within a team, the more likely they are to work effectively together, contributing to a positive workplace culture.

Moreover, engaging in extracurricular activities with colleagues provides a necessary break from the work routine, which can reduce stress and prevent burnout. It gives employees a chance to recharge, be creative, and return to work with renewed energy and motivation. These activities also allow for the development of new skills and interests that might not be explored in the office, enriching the overall work experience. Having a balanced approach that includes socializing with colleagues outside of work creates a sense of well-being, leading to higher job satisfaction and, ultimately, better productivity in the workplace.



### SOCIAL CLUB

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.



### ARTS CLUB

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.



### SPORTS 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.



## CONTACT US

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**LEARNING BY DOING**

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