



A KÖZÖSSÉGÉRT
Alapítvány



LEARNING
BY DOING



24/25

MOL PROGRAM

OF THE TRANSLATIONAL EDUCATION PROGRAMS

Join our high quality educational program to learn the methods of translational medicine.



tmalapitvany



TMFoundationHQ



transmedkozpont

TM-CENTRE.ORG

SEMMEWEIS UNIVERSITY
CENTRE FOR TRANSLATIONAL MEDICINE

PROGRAM SUMMARY

BASIC INFORMATION ABOUT THE PROGRAM

WHAT WE'RE OFFERING:

- Grant opportunity for young medical and health science professionals from Romania, the Czech Republic, and Slovakia!
- Perform independent healthcare delivery science
- Understand the main modern clinical scientific methodologies
- Critically appraise clinical research studies using a systematic approach



DURATION OF THE GRANT

First year of the PhD training at the Centre for Translational Medicine, Semmelweis University.

COURSE DIRECTOR

Péter Hegyi, MD, PhD, DSc, MAE

ORGANISERS

The **MOL program** is organized by the Centre for Translational Medicine, Semmelweis University in collaboration with the MOL Group and the Translational Medicine Foundation.

SCHOLARSHIP

MOL Scholarship of **140,000 HUF / month** in the first year and a State PhD Scholarship of **140,000 HUF / month** for the first two years, increasing to **180,000 HUF / month** in the third and fourth years.



FOR MORE INFORMATION,
PLEASE VISIT OUR WEBSITE



WHO WE ARE

ABOUT OUR INSTITUTE



SEMMEIWEIS UNIVERSITY

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

TRANSLATIONAL MEDICINE FOUNDATION

The Translational Medicine Foundation was established in 2016 to

- a)** promote the practical application of scientific results and innovations in health care
- b)** stimulate and unify the exchange of information and data flow between universities, hospitals and research centres, and to help their quality control, which can significantly improve the quality of multicenter research projects and reduce the amount of resources needed for research projects
- c)** help all members of the population (including healthy individuals, patients, doctors, etc.) to understand and implement evidence-based knowledge in everyday life through various platforms (web, printed materials, videos, etc.)
- d)** participate in the organization of conferences and trainings, in procuring research-related services and in providing financial aid in the search and selection of human resources





THE HISTORY

OF TRANSLATIONAL MEDICINE IN HUNGARY

The Translational Medicine (TM) “learning by doing” education model was launched in Hungary in 2016 under the leadership of Péter Hegyi, who is the course director of this uniquely developed **PHD PROGRAM**. In the past five years, almost 50 PhD students and residents have participated in our programs. In this period, more than 300 high quality publications have been published through scientific research and translational patient care initiated and supported by the Translational Medicine Foundation, the University of Pécs, the University of Szeged and the Semmelweis University (*Nature Medicine*). The results have made it possible to develop and supplement a number of treatment guidelines and to immediately apply scientific results in 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.

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, in 2021 this programme was invited to function in a much bigger scale than before, now under the umbrella of Semmelweis University. As a results, the training at SU already enrolled more than 240 PhD students, and almost 100 undergraduate research students.

FIND MORE INFORMATION ABOUT THE CENTRE
FOR TRANSLATIONAL MEDICINE HERE



THE IMPORTANCE OF TRANSLATIONAL MEDICINE

The major goal of TM is to turn scientific results for community benefits. Why is this necessary? It is very simple: we currently use 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 75 years of age died in Europe in 2016, with around 1.2 million of those deaths being avoidable 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 utilisation 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 advance the development of TM. This model focuses equally on the acquisition of new scientific results healthcare, understandable and digestible summation of results, and their communication to all participants. The authors, including senior officers of Academia Europaea, produced an important paper to serve as a basis for revising thinking on TM with the end result of enabling more efficient and cost-effective healthcare.



YOU CAN FIND FURTHER INFORMATION
ON OUR YOUTUBE CHANEL AS WELL



MOL PROGRAM

WHAT WE OFFER

The **MOL PROGRAM** is for students just before graduation or young resident and specialty doctors. Furthermore any healthcare specialist can apply who fulfill the criteria listed below. During the 1-year extensive program they can learn all the methodologies and then put them to use in their own research facilities when they return home. Scientists will have the opportunity to write their own first-authored articles. We offer help in learning the methodologies and provide statistical support. Regular group meetings will be held to report on progress. Good communication skills in English are required. Those participating in the MOL program will follow the first year training of the Translational Medicine PhD training at the Semmelweis University. We also provide the possibility to join as a PhD student.

THE MOL PROGRAM FOCUSES ON THE MAIN MODERN HEALTHCARE DELIVERY SCIENTIFIC METHODOLOGIES OF TM:

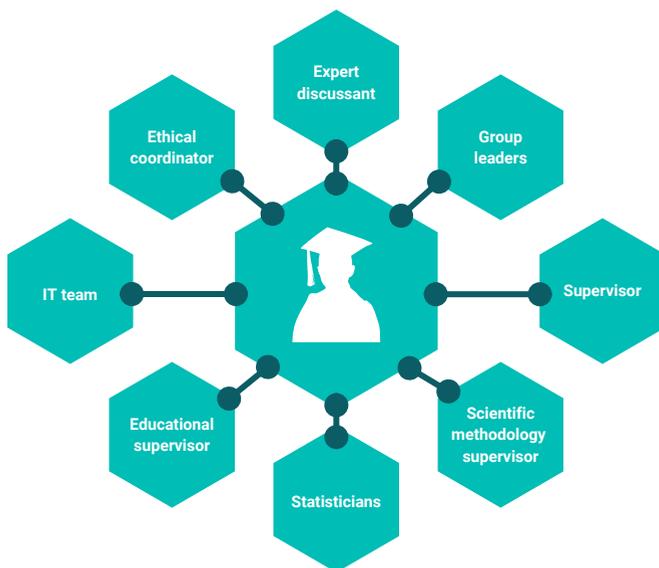
- 1. Systematic reviews and meta-analysis** – we aim to introduce the essentials of meta-analyses, focusing on their role in the evidence-based medicine and the main steps leading to a meta-analysis. Questions will cover key topics, such as how to design systematic search strategies, how to read forest plots, and how to assess the validity of the findings. By attending the series of lectures, participants will learn how to read, understand, and conduct meta-analyses.
- 2. Patient registries** – in this part we aim to introduce patient registries with their role in science, focusing on practical questions. Topics will embrace the entire process from planning a registry to publication. The general built of a registry, the role of the patient registry coordinator and the contributors in the phase of registry development will be discussed. The course will include presentations on the IT background, details on how to develop an electronic case report form, data management, ethical approval, and other roles, such as biostatisticians and clinical research administrators.
- 3. Clinical trials** – this part of the school aims to overview the main features of experimental study designs and their role in science, focusing on practical questions. Topics will embrace the entire process from study planning to conclusions from result. Questions will cover key topics, such as the identification of study designs, the role of randomization, the effects of bias, and the judgement of cause-effect relationship.
- 4. Biostatistics** - aim of this lecture is to make the participants familiar with the basics of statistical methods used in the medical/biological sciences. Furthermore, to help the participants to interpret the results of statistical analysis more easily and to recognize possible biases in scientific literature. The lecture introduces the most commonly used statistical methods, thus the participants get acquainted with the most important elements of descriptive statistics, basic principles of hypothesis testing, parametric and non-parametric statistical methods and risks of decision errors. Furthermore, topics such as survival analysis, adaptation of questionnaires, sensitivity and specificity of diagnostic tests, and Receiver Operating Characteristic (ROC) Curve analysis will also be covered during the course.

5. Clinical pharmacology - The course will cover the fundamentals of clinical pharmacology as a translational scientific discipline focused on rational drug development and utilization in therapeutics. The course focuses on the following core principles of pharmacology: pharmacokinetics, pharmacodynamics and toxicology; drug discovery and development and clinical study protocol design. Furthermore, the course will cover advanced clinical trial concepts like medical device development, advanced therapeutic medicinal products (e.g. gene therapy), clinical trial and software development in clinical trials, and basics of pharmacovigilance. This course intends to complement the other courses of the translational research teaching program so that participants will have a broad and in-depth overview of the mainstream methodologies of clinical research.

6. Soft skills in medical research - In our PhD program, we emphasize the critical role of soft skills in medical research, offering a suite of 13 courses designed to complement the technical expertise of our students. From leadership principles that foster effective team management and ethical decision-making, to advanced communication and presentation skills crucial for disseminating complex research findings. We also delve into the intricacies of grant writing, essential for securing research funding, and introduce healthcare entrepreneurship to equip students with the knowledge to translate research into impactful healthcare solutions. This holistic approach ensures our graduates are not only adept researchers but also skilled communicators, leaders, and innovators in the medical field.

CTM STAFF - INTERDISCIPLINARY RESEARCH SUPPORT

Our centre provides the help of an interdisciplinary research support team to support the work of researchers and Ph.D. students. Continuous support is provided in a weekly basis during the so called group meetings and project meetings. Additional support can be requested from the other members of the team.



CONTINUOUS SUPPORT IS OFFERED BY:

1. An **Expert Discussant** is appointed for each group. She/He is a highly experienced physician-scientist who provides help from the design of the study until the publication. She/He helps the students (1) to polish their projects, (2) to find the big picture and (3) challenges them week after week.
2. The **group leaders** are experienced physician-scientists who are well known representatives of the given field and have a record of high level research productivity.
3. The **supervisor** of each fellow is senior clinicians (expert) who raises relevant clinical questions, determines the direction of the research and bridges the gap between the theoretical and clinical work in the clinical PhD program. These tutors continuously lead the research work of the fellows during the whole program.
4. **Scientific methodology supervisors** (SMS) 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-analyses, patient registries, and clinical trials.
5. **Science methodology advisor and expert** (SMA and SME) are highly experienced methodologists who are responsible for the development of the learning material, for the SMS group, and provide the coordination for the different scientific methods, e.g. meta-analysis coordinator
6. **Biostatisticians** are appointed to each group to provide valuable help for the statistical work of the project.

ADDITIONAL SUPPORT:

1. **Educational supervisors** are expert in the various fields taught through courses to the fellows. Such courses include meta-analysis, patient registry, clinical trial, biostatistics, data handling and clinical pharmacology. Statisticians are appointed to each group to provide valuable help for the statistical work of the project.
2. **IT team** continuously provides help in the development of the electronic case report forms. In addition, they will help with the testing of the electronic interface and ensures the coordination of maintenance.
3. **Ethical coordinator** helps with the process of ethical licensing, obtaining, preparing and submitting the documentation required for ethical approval to the relevant authorities. Consultation with the principal investigator during the process.
4. **Soft skill trainers** provide education regarding the art of scientific communication and networking.

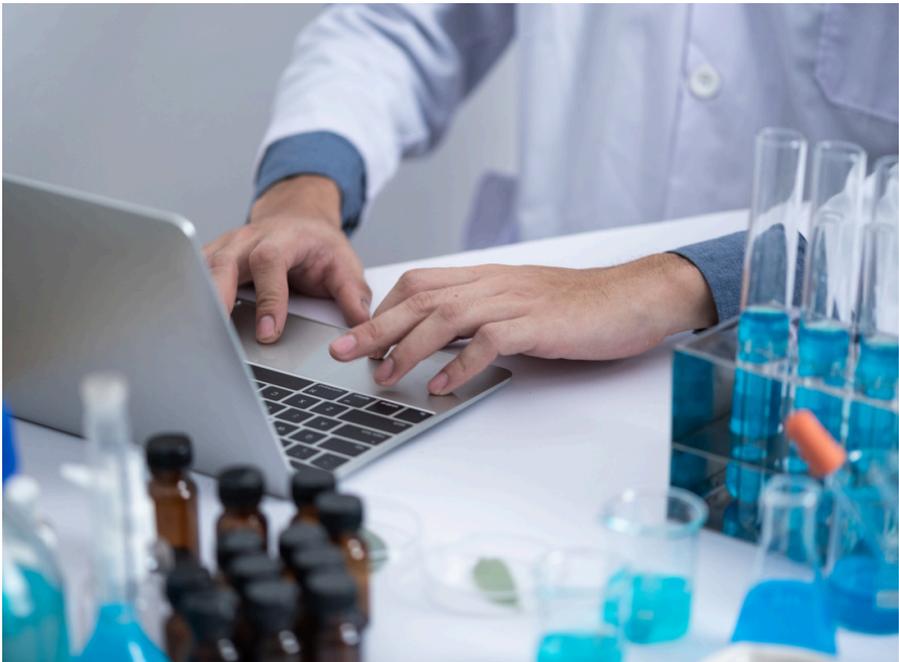


ADDITIONAL ACTIVITIES

Three clubs were founded to provide students the chance to relax after meetings. Sport, Art and Social clubs organise different activities based on different interests. The sport club organises weekly running, swimming and squash, while the art club offers programs, like concerts, exhibitions. Occasionally there are different themed social evenings organised by our social club.

OUTCOMES OF THE TRAINING

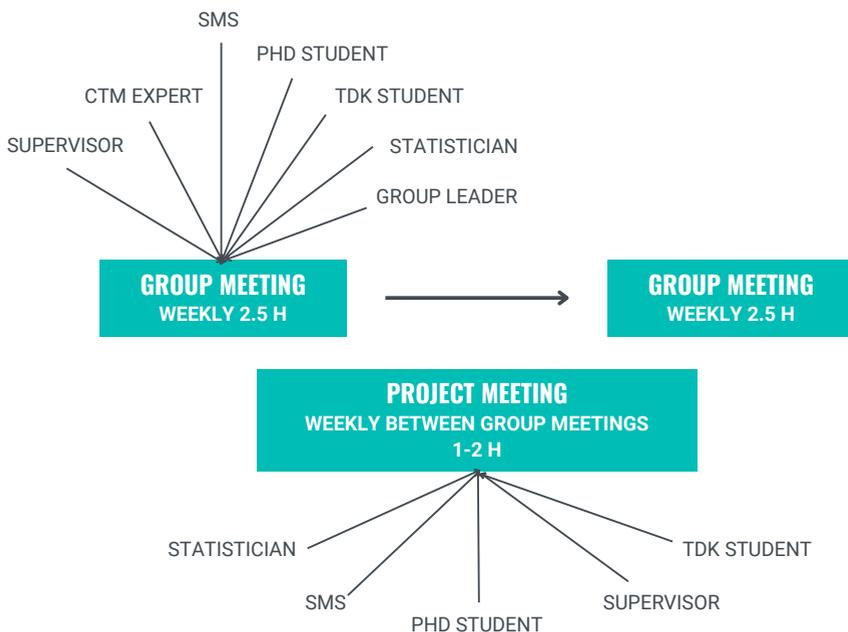
- Participants will be able to understand the concept of the healthcare delivery science as part of the translational medicine cycle
- At the end of the training, participants will learn the main points of setting up a patient registry, initiating a clinical trial, or conducting a comprehensive systematic review with meta-analysis.
- Critically appraise clinical research studies using a systematic approach.
- Define the basic knowledges and skills required in translational research.
- Grow the professional international network of translational researchers.
- PhD degree with high level scientific achievements
- In addition, participants will gain presentation skills, debating skills, language skills, and organizational skills.



SCHEDULE AND CLASSES

The schedule corresponds with the PhD training schedule of the Translational Medicine PhD training. During the training period, there will be **regular and periodical meetings**. In addition, the training structure differs between the training years. The curriculum includes e-learning materials and on-site meetings, while the project discussions are held in-person meetings and using online platforms as well. **The first year focuses** on the project conceptualization and starting the projects necessary for the PhD. For this, in the first year, we focus on the main methodologies on a weekly basis. First, we organize group meetings for students with a similar field of interest, including their supervisor. Second, in the first part of the first-year regular courses are organized, generally with e-learning followed by a practical course week. The third part of the week is represented by the project meetings, where we focus on particular projects discussed with the project team.

If you started your PhD training, then **starting from the second year**, these meetings will be organized on a monthly basis, mainly focusing on patient enrollment in prospective studies or finishing up the started projects. To ensure that everyone achieves the set milestones, **regular audits are organized**.



GROUP MEETINGS

The main structure of the program is represented by the group meetings. Student in the program are grouped according to their scientific fields. Currently we have groups based on the following topics: dentistry, gynecology, urology, cardiology, intensive care medicine, neuropsychiatry, orthopedics&traumatology, pediatrics, gastroenterology, endocrinology, COVID-19 and infectious diseases, pharmacology, and miscellaneous.

Each group includes 7-14 students, their supervisor, and project students, on the other hand the centre allocates 1-2 SMSs, a statistician and an expert discussant to the group.

During the first year, each group has a meeting each week in a pre-specified day and hour for the year. In these meetings each fellow presents his/her progress during the previous week and the group jointly discusses the scientific questions, presentations and the progresses. Starting from the second year, following the same group structure, there are pre-specified monthly meetings with the same purpose.

REGISTRY AND CLINICAL TRIAL MEETINGS

Our very dedicated registry and clinical trial coordinator group organizes periodical meetings, where project groups can present their registry and clinical trial initiation and analysis plans. Each meeting is held periodically, on a pre-specified date, separately for each academic year.

PROJECT MEETING

The individual projects are also weekly managed by small study groups which consist of at least the junior fellow and a senior fellow, the tutor, the biostatistician and, if necessary for the project, an expert specialist. The project meetings are lead by the SMS, dedicated to the project team. The project team contacts the SMS with any research related question, who will ensure the fastest and most accurate guidance. The projects are essentially meta-analyses, patient registries, clinical trials, and basic research projects in which the research fellow is the principal investigator (i.e. first author).

Every student will start with a systematic review and meta-analysis in his/ her research field, which should represent the literature search and the basis of the other projects like clinical trials or prospective patient registries.

COURSES

Our research fellows receive scientific and methodological education which is very intensive in the first year in the frame of weekly courses. A list of the included courses are summarized in Table 1. Most of the courses consist of an e-learning part, followed by an on-site workshop. The courses are held by members of the centre or by invited high qualified lecturers.

Courses are organized three times per week, each day for a different set of groups. During the year we follow the same weekly schedule for the groups. Course attendance is mandatory for the first year students. However, we are continuously developing our learning material. Therefore, it is highly suggested for other years as well to follow our courses. On the other hand, the Translational Medicine PhD training ensures the necessary credits to be able to attend the Complex Exam at the end of the fourth semester.

COURSES DURING THE FIRST YEAR OF THE PHD PROGRAM

DATE	COURSE/SEMINAR LECTURE
Week of September 2nd	E-learning: systematic review and meta-analysis
September 9th	Practice: systematic review and meta-analysis
September 16th	E-learning: patient registries
September 23rd	Practice: patient registries
September 30th	E-learning: clinical trials
October 14th	E-learning: biostatistics
October 21st	Practice: biostatistics
October 28th	E-learning: clinical pharmacology
November 4th	Practice: clinical pharmacology
November 11th	E-learning: advanced trial
November 18th	Practice: advanced trial
December 2nd	E-learning: Excel training
December 9th	Practice: Excel trainings
January 6th, 2025	E-learning: article writing
January 13th	Practice: article writing
January 20th	Soft skill course part I: self-management
January 27th	Soft skill course part II: assertive communication
February 3rd	Soft skill course part III: effective cooperation and team-work
March 10th	Grants, research and developments
March 17th	Bioinformatics
April 7th	Introduction to basic science

MOODLE E-LEARNING SYSTEM

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

Website: elearning.tm-centre.org/edu

SEMINAR LECTURES

There are a total of 8 seminar lectures planned during each year of the training. For the seminar lectures we plan to invite role model researchers with an outstanding scientific achievement. The list of lecturers will be available at the start of the program. You can see a previous seminar lecture invitation [here](#).

PROGRESS REPORTS DURING THE TRAINING

During the training we will organize audits for the PhD students every 3-months.

During the progress report students will have 8-10-minutes to present their progress followed by an open discussion. For the progress report multiple groups are schedule for one day, therefore student can have an insight in other projects and practice multidisciplinary discussions. Watch a short summary of a previous Progress Report [here](#).

MILESTONES

The first three months is about the conceptualization of the systematic review. With the help of the group, during the group meeting we aim to find the best research questions. During the first 3-months students should end with the systematic search and selection of the literature.

During the next 3-months we concentrate on the data collection and the results. In this period, we aim to discuss the result of each project on a structured way, therefore at the end of the first 6-months students should be able to present their results of the meta-analysis.

For the meta-analysis, the next 3-months is about the article writing, at the end of this period the manuscript should be ready to be submitted to top journals. On the other hand, in this period the other projects of the students should be discussed. If the student has another systematic review, he/she should be ready with the literature search. If it is a clinical research question or basic research questions, the protocol of the study should be planned.

At the end of the year, with the proper commitment students should have two projects submitted and patient enrollment started if a prospective study is planned.

Starting from the 2nd year, there will be a progress report every 6 months, with the same presentation structure.

ENGLISH LANGUAGE COURSES – HAVE ADDITIONAL CHARGE

The training is in English. The scientific English skills of the students are developed by the regular presentations, meetings, and courses. If additional language training is required the centre can provide guidance on it, however, this may have additional charges.

APPLICATION

HOW TO JOIN OUR PROGRAM

CLICK HERE
OR SCAN THE
CODE TO APPLY



TARGET AUDIENCE

- Application submitted for the PhD Program of the Centre for Translational Medicine, Semmelweis University
- Medical or dentistry student just before graduation, OR resident doctors, OR young specialty doctors, OR other healthcare professionals with MSc degree
- Interest in biomedical research
- Age below 35 years
- Good English communication skills are recommended (minimum B2 levels)
- Romanian, the Czech Republican, or Slovakian citizenship
- Choosing an SU affiliated supervisor
- Successful application process

SCHOLARSHIP

MOL Scholarship of **140,000 HUF / month** in the first year and a State PhD Scholarship of **140,000 HUF / month** for the first two years, increasing to **180,000 HUF / month** in the third and fourth years.

The scholarship dose not include accommodation or any other personnel costs. On the other hand, there are no training costs for the selected participants.



APPLICATION PROCESS

1. Fill in the pre-application form ([here](#))
2. Phone call with senior members of the Centre for Translational Medicine
3. Submit final application for PhD training

IMPORTANT DATES

The application deadline is **June 30, 2024**

The interview period will be around the **middle of July, 2024**

Acceptance notification will be sent by **end of July, 2024**

Start of the program is **August 26, 2024**

RESPONSIBILITIES OF THE CENTRE

The Centre will provide access to the training materials in case of successful recruitment, but this does not cover the technical requirements for access, in particular a stable internet connection and computer equipment. The application fee covers the costs of the application procedure, and the Centre does not undertake to reimburse the costs of unsuccessful applications. Students who are successfully admitted will be offered a training contract by the Centre. Hungarian law will apply to the application process and the training as a whole.



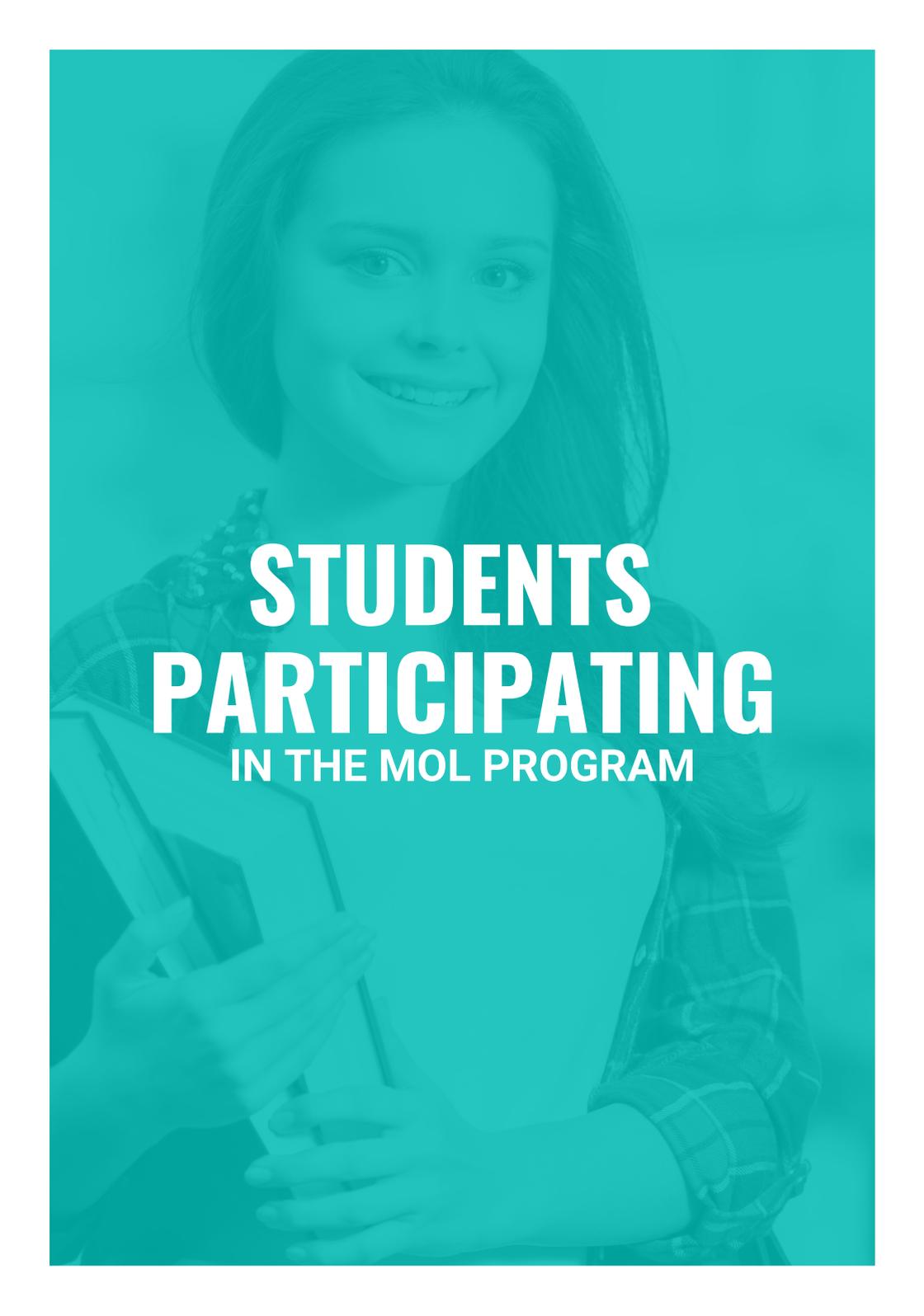
MORE INFORMATION

Should you need any further information, please do not hesitate to contact us: tmk@semmelweis-univ.hu

SU, Centre for Translational Medicine | HU-1085 Budapest, Baross Street 22, BC22 Office, 4th floor

[Our website](#)





**STUDENTS
PARTICIPATING
IN THE MOL PROGRAM**



STEFANIA BUNDUC

FUNDENI CLINICAL INSTITUTE, BUCHAREST, ROMANIA

INTRODUCTION

Stefania is a specialist doctor in Gastroenterology in Romania. She took part in a 12-month research fellowship programme. During this time she worked on 2 meta-analyses evaluating the prognostic role of liquid biopsy in pancreatic adenocarcinoma – for cfDNA and exosomes, respectively. Moreover, she had the opportunity to further collaborate in several other projects with her colleagues. She was also a scientific method supervisor within the Center for Translational Medicine for one year, during 2021-2022. She had a fruitful collaboration with students in the Gastroenterology and endocrinology and Miscellaneous groups respectively by offering methodological advice for their research projects. She is also a PhD candidate and her thesis is on “Somatic mutational profile of pancreatic adenocarcinoma”.

OPINION ON THE PROGRAM

A professional in healthcare, either medical doctor, physiotherapist, dietitian, psychologist - should be up to date with the advancement in their fields, to be able to offer the best available care for their patients. To keep the pace with the continuously growing evidence in healthcare, one must understand the science behind it. The MOL program is a great opportunity to gain this kind of knowledge. During an intense 12 month period of courses, workshops, seminar lectures the attendees develop their own research projects under the guidance of experts in their field, science methodologists, statisticians and with continuous feedback from the peers. Besides the solid knowledge on how to perform robust medical research, the program also offers tremendous networking opportunities that can spark multidisciplinary, multicentric, international collaborations.

PUBLICATIONS AND PROJECTS

During my MOL scholarship I was able to publish 2 papers as first author and collaborated in many others. Furthermore, my collaboration with the CTM continued beyond the MOL program and strengthened the partnership between the Center for Translational Medicine of Semmelweis University and Carol Davila University of Medicine and Pharmacy from Bucharest, Romania, to which I am currently affiliated.

Publications 2020 - 2023

Exosomes as prognostic biomarkers in pancreatic ductal adenocarcinoma—a systematic review and meta-analysis. **TRANSLATIONAL RESEARCH**. VOLUME 244, JUNE 2022, PAGES 126-136

Prognostic role of cell-free DNA biomarkers in pancreatic adenocarcinoma: A systematic review and meta-analysis. **CRITICAL REVIEWS IN ONCOLOGY/HERMATOLOGY**. VOLUME 169, JANUARY 2022, 103548

GAVE: a gastroenterologist challenge. **J Gastrointestin Liver Dis**. 2021 Mar 13;30(1):168-169.

Selective intraoperative cholangiography should be considered over routine intraoperative cholangiography during cholecystectomy: a systematic review and meta-analysis. **Surg Endosc**. 2022 Oct;36(10):7126-7139.

Repeated SARS-CoV-2 Positivity: Analysis of 123 Cases. **Viruses**. 2021 Mar 19;13(3):512.

Alcohol consumption and smoking dose-dependently and synergistically worsen local pancreas damage. **Gut**. 2022 Dec;71(12):2601-2602

Detailed Characteristics of Post-discharge Mortality in Acute Pancreatitis. **Gastroenterology**. 2023 May 27;S0016-5085(23)00801-6.

Genetic and non-genetic risk factors for early-onset pancreatic cancer. **Dig Liver Dis**. 2023 Mar 25;S1590-8658(23)00514-5.

The PANcreatic Disease ReseArch (PANDoRA) consortium: Ten years' experience of association studies to understand the genetic architecture of pancreatic cancer. **Crit Rev Oncol Hematol**. 2023 Jun;186:104020.

Early prediction of acute necrotizing pancreatitis by artificial intelligence: a prospective cohort-analysis of 2387 cases. **Sci Rep**. 2022 May 12;12(1):7827.

Genetic Polymorphisms Involved in Mitochondrial Metabolism and Pancreatic Cancer Risk. **Cancer Epidemiol Biomarkers Prev**. 2021 Dec;30(12):2342-2345.

Association of Genetic Variants Affecting microRNAs and Pancreatic Cancer Risk. **Front Genet**. 2021 Aug 30;12:693933.

No evidence for the benefit of PPIs in the treatment of acute pancreatitis: a systematic review and meta-analysis. **Sci Rep**. 2023 Feb 16;13(1):2791.

Association between a polymorphic variant in the CDKN2B-AS1/ANRIL gene and pancreatic cancer risk. **Int J Cancer**. 2023 Jul 15;153(2):373-379.

The combination of ulinastatin and somatostatin reduces complication rates in acute pancreatitis: a systematic review and meta-analysis of randomized controlled trials. **Sci Rep**. 2022 Oct 26;12(1):17979.

Immunoglobulin Response and Prognostic Factors in Repeated SARS-CoV-2 Positive Patients: A Systematic Review and Meta-Analysis. **Viruses**. 2021 Apr 30;13(5):809.

Acid suppression therapy, gastrointestinal bleeding and infection in acute pancreatitis - An international cohort study. **Pancreatology**. 2020 Oct;20(7):1323-1331.

Inflammatory bowel disease does not alter the clinical features and the management of acute pancreatitis: A prospective, multicentre, exact-matched cohort analysis. **Pancreatology**. 2022 Dec;22(8):1071-1078.

Addition of daratumumab to multiple myeloma backbone regimens significantly improves clinical outcomes: a systematic review and meta-analysis of randomised controlled trials. **Sci Rep**. 2021 Nov 9;11(1):21916.

Endoscopic ultrasound-guided fine-needle aspiration pancreatic adenocarcinoma samples yield adequate DNA for next-generation sequencing: A cohort analysis. **World J Gastroenterol**. 2023 May 14;29(18):2864-2874.

Polymorphic variants involved in methylation regulation: a strategy to discover risk loci for pancreatic ductal adenocarcinoma. **J Med Genet**. 2023 May 2;jmg-2022-108910.



BRIGITTA TEUTSCH

UNIVERSITY OF MEDICINE AND PHARMACY OF TÂRGU MUREȘ

INTRODUCTION

Brigitta participated in a 12-month research fellowship program between 2020-2021. Her main aim is to improve the management of gastrointestinal (GI) bleeding-related anaemia. To achieve this goal, she conducts a systematic review and meta-analysis about the efficacy and safety of restrictive red blood cell transfusion in acute GI bleeding. With her second project, a registry analysis from the Hungarian GI Bleeding Registry, she will assess the predictive value of haemoglobin change in blood transfusion. Based on her pre-study protocol, she plans to conduct a randomised controlled trial to investigate the role of intravenous iron compared to oral iron supplementation in moderately anaemic participants after GI bleeding. With her fourth project, she studied different preventive and therapeutic options in NSAID-induced small intestinal enteropathies.

Currently, Brigitta is a PhD candidate and works as a Scientific Methodology Advisor, Patient Registry and Clinical Trial Coordinator at the Centre for Translational Medicine, Semmelweis University, Hungary.

OPINION ON THE PROGRAM

Critical thinking and selection from the available medical information from the literature are crucial in healthcare. I recommend applying to the MOL program for all doctors who want to develop these skills and increase patient management quality. During the fellowship year, I had the opportunity to have more insight into various research methodologies and get familiar with multicentric patient registries and clinical trials. Moreover, I got support from a multidisciplinary group of researchers and medical experts, statisticians and informaticians to conduct my studies. Besides publishing, networking with the scientific community is also essential. With the help of the MOL program, I was able to meet researchers at national and international conferences, where I was able to present my studies.

PUBLICATIONS AND PROJECTS

Scientometric data:

Scientific publications in foreign scientific journals: **12**. Independent references: **45**. Total impact factor: **66.230**. Hirsch index: **4**.

Publications 2020 - 2023

Mucoprotective drugs can prevent and treat nonsteroidal anti-inflammatory drug-induced small bowel enteropathy: a systematic review and meta-analysis of randomised controlled trials.

THERAPEUTIC ADVANCES IN GASTROENTEROLOGY (2021). DOI: 10.1177/17562848211038772

Intravenous ferric carboxymaltose versus oral ferrous sulfate replacement in elderly patients after acute non-variceal gastrointestinal bleeding (FIERCE): protocol of a multicentre, open-label, randomised controlled trial. **BMJ OPEN** (2023). DOI: 10.1136/bmjopen-2022-063554

First-Trimester Influenza Infection Increases the Odds of Non-Chromosomal Birth Defects: A Systematic Review and Meta-Analysis. **Viruses**. 2022 Dec 2;14(12):2708.

Repeated SARS-CoV-2 Positivity: Analysis of 123 Cases. **Viruses**. 2021 Mar 19;13(3):512.

Therapeutic sensitivity to standard treatments in BRCA positive metastatic castration-resistant prostate cancer patients-a systematic review and meta-analysis.

Prostate Cancer Prostatic Dis. 2022 Dec 12.

Detailed Characteristics of Post-discharge Mortality in Acute Pancreatitis.

Gastroenterology. 2023 May 27;S0016-5085(23)00801-6.

No Association between Gastrointestinal Rebleeding and DOAC Therapy Resumption: A Systematic Review and Meta-Analysis. **Biomedicines.** 2023 Feb 14;11(2):554.

Trichomonas vaginalis infection is associated with increased risk of cervical carcinogenesis: A systematic review and meta-analysis of 470 000 patients. **Int J Gynaecol Obstet.** 2023 Apr 3.

Anaemia Is Associated with an Increased Risk of Fractures, a Systematic Review, and Meta-Analysis. **Gerontology.** 2023;69(1):1-13.

Immunoglobulin Response and Prognostic Factors in Repeated SARS-CoV-2 Positive Patients: A Systematic Review and Meta-Analysis. **Viruses.** 2021 Apr 30;13(5):809.

Prophylactic transcatheter arterial embolization reduces rebleeding in non-variceal upper gastrointestinal bleeding: A meta-analysis. **World J Gastroenterol.** 2021 Oct 28;27(40):6985-6999.

Galactomannans are the most effective soluble dietary fibers in type 2 diabetes: a systematic review and network meta-analysis. **Am J Clin Nutr.** 2023 Feb;117(2):266-277.

Improved body composition decreases the fat content in non-alcoholic fatty liver disease, a meta-analysis and systematic review of longitudinal studies.

Front Med (Lausanne). 2023 May 4;10:1114836.

Metabolic-associated fatty liver disease is associated with acute pancreatitis with more severe course: Post hoc analysis of a prospectively collected international registry.

United European Gastroenterol J. 2023 May;11(4):371-382.

Microscopic colitis is a risk factor for low bone density: a systematic review and meta-analysis.

Therap Adv Gastroenterol. 2023 Jun 15;16:17562848231177151.

Ongoing projects

- Restrictive transfusion is non-inferior to liberal transfusion in upper gastrointestinal bleeding: a systematic review and meta-analysis of randomised controlled trials
 - The role of haemoglobin change in transfusion after gastrointestinal bleeding: a cohort analysis from the Hungarian Gastrointestinal Bleeding Registry
-



ANETT RANCZ

SEMMELEWEIS UNIVERSITY, CENTRE FOR TRANSLATIONAL MEDICINE

INTRODUCTION

Anett is a second year PhD student in the gastroenterology and endocrinology group of the CTM, and her main field of interest is microscopic colitis (MC). In her first project, she assessed if MC is a risk factor for low bone density (LBD) and the prevalence of LBD in MC patients through a systematic review and meta-analysis. Her second project is also a systematic review and meta-analysis, focusing on the risk factors of microscopic colitis. She collected all the data regarding lifestyle factors (e.g. smoking, alcohol consumption) and medications (e.g., nonsteroidal anti-inflammatory drugs, proton pump inhibitors, and selective serotonin reuptake inhibitors), which may contribute to the development of MC. As a third project Anett is working on establishing a Hungarian Microscopic Colitis Registry. In the meantime she works as scientific methodology supervisor at the CTM.

OPINION ON THE PROGRAM

In my opinion, this program allows us to learn by ourselves, based on the concept of learning by doing, with the guidance of great professionals. With the help received, I believe we will contribute to improving patient care.

PUBLICATIONS AND PROJECTS

Published

- Microscopic Colitis Is a Risk Factor for Low Bone Density: A Systematic Review and Meta-Analysis. **Endoscopy**. 2023; 55(S 02): S202

Ongoing projects

- Risk factors for microscopic colitis: a systematic review and meta-analysis
 - Hungarian Microscopic Colitis Registry
-



EMŐKE HENRIETTA KOVÁCS

FUNDENI CLINICAL INSTITUTE, DEPARTMENT OF ANESTHESIOLOGY,
BUCHAREST

INTRODUCTION

Emőke is a resident doctor at Fundeni Clinical Institute, Department of Anesthesiology, Bucharest. Her first project entails conducting a systematic review and meta-analysis. This undertaking aims to examine the safety and efficacy of various anticoagulant dosage regimens employed for thrombosis prophylaxis in COVID-19 patients and their impact on clinical outcomes. The primary objective is to investigate whether administering higher anticoagulant doses than those typically utilized for routine prophylaxis yields favorable effects on clinical outcomes without jeopardizing safety in COVID-19 patients. As her second project, she will execute a prospective meta-analysis scrutinizing the effects and safety of fibrinolytic therapy in critically ill COVID-19 patients experiencing acute respiratory distress syndrome. Lastly, she initiated a multicenter prospective observational study to explore the effects of immunomodulation with Tocilizumab on the coagulation system in critically ill COVID-19 patients.

OPINION ON THE PROGRAM

This program has afforded me the invaluable opportunity to expand my understanding of scientific methodology and witness firsthand the application of scientific findings in clinical settings. Additionally, I was fortunate to interact with exceptional scientists. I am immensely thankful to my supervisors for imparting invaluable knowledge and guidance throughout this experience.

PUBLICATIONS AND PROJECTS

Published

Kovács, Emőke Henrietta, et al. "Higher Dose Anticoagulation Cannot Prevent Disease Progression in COVID-19 Patients: A Systematic Review and Meta-Analysis." **BIOMEDICINES**. 10.9 (2022): 2194.

Kovács, Emőke Henrietta, et al. "Effectiveness and safety of fibrinolytic therapy in critically ill patients with COVID-19 with ARDS: protocol for a prospective meta-analysis." **BMJ OPEN**. 12.9 (2022): E063855.

Kovács, Emőke Henrietta, et al. "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**. 12.11 (2022): E063856.

Ongoing projects

- Investigating the association between IL-6 antagonist therapy and blood coagulation in critically ill patients with COVID-19: a prospective, observational, multicentre study
 - Effectiveness and safety of fibrinolytic therapy in critically ill patients with COVID-19 with ARDS - registry analysis and a systematic review
 - The alterations of the fibrinolytic system in COVID-19 - a systematic review
-



CRISTINA PATONI

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

INTRODUCTION

Cristina is a gastroenterologist resident in her third year of training at the Central Military Emergency University Hospital, and she is also a PhD student in the Ph.D. program of the University of Medicine and Pharmacy "Carol Davila" from Bucharest. Her Ph.D. topic is "Recurrent acute pancreatitis: etiology, diagnosis, management". She is participating in a 12-month Ph.D. fellowship program, and her focus is acute pancreatitis. She started a systematic review and meta-analysis about the efficacy and safety of prophylactic anticoagulant treatment in acute pancreatitis. Her project could help in the prevention of severe acute pancreatitis, thus decreasing the mortality rate. Her second project will be also a meta-analysis of the safety of early versus late endoscopic/percutaneous interventions in necrotizing pancreatitis.

OPINION ON THE PROGRAM

The PhD program in translational medicine offers a unique opportunity for aspiring researchers. By working on their own projects collaboratively, students gain valuable hands-on experience while benefiting from a supportive learning environment. The blended education approach combines theoretical knowledge with practical skills, ensuring a well-rounded education. The program's emphasis on presenting at conferences further enhances students' professional development and networking opportunities. Overall, this PhD program provides an exceptional platform for aspiring researchers to excel in the field of translational medicine and make meaningful contributions to the advancement of healthcare.

PUBLICATIONS AND PROJECTS

Ongoing projects

- Efficacy and safety of prophylactic anticoagulant treatment in acute pancreatitis: a systematic review and meta-analysis
 - Safety of early versus late endoscopic/ percutaneous interventions in infected necrotizing pancreatitis: a systematic review and meta-analysis
-



MIHAELA TOPALA

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

INTRODUCTION

Mihaela Topala is a Gastroenterology resident at Fundeni Clinical Institute and also a PhD student at "Carol Davila" University of Medicine and Pharmacy in Bucharest. She is currently participating in the 12 months research fellowship program (2022-2023). Her research activity is focused in particular on inflammatory bowel disease (IBD) and her work is driven by the belief that through science we can improve patients' lives. She is conducting a meta-analysis and a systematic review regarding surgical techniques in Crohn's disease that might have a positive impact on the postoperative outcome.

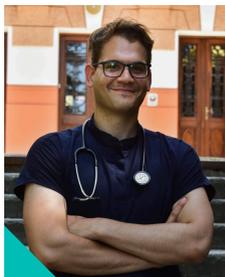
OPINION ON THE PROGRAM

This program offered me the opportunity to work with highly skilled researchers that provided all the support needed to conduct my projects. The MOL fellowship is suitable for those who work in the healthcare field and are passionate about evidence-based medicine. The program includes various courses, meetings and lecture seminars that help to expand your knowledge in clinical and epidemiological research. Moreover, you will have the chance to meet international scientists and join research groups, which can represent a first step towards a successful scientific career.

PUBLICATIONS AND PROJECTS

Ongoing projects

- Effectiveness of extended mesenteric excision in preventing postoperative Chron's diseases recurrence: a systematic review and meta-analysis
 - Efficacy and safety of endoscopic balloon dilatation for Chron's disease strictures: a systematic review and meta-analysis
-



ELŐD-JÁNOS ZSIGMOND

SEMMEIWEIS UNIVERSITY, DEP. OF PSYCHIATRY AND PSYCHOTHERAPY

INTRODUCTION

Előd-János completed his studies at the University of Medicine and Pharmacy of Targu Mures, and now is working as a volunteer at the Medical Center - Hungarian Defence Forces Cardiology Department. His main research field is cardiac implantable electronic device (CIED) therapy. During the program, he is investigating the role of different optimization techniques in cardiac resynchronization therapy and the role of biomarkers in predicting device infection. Besides these, he is also interested in transvenous lead extraction, which is the gold standard therapy of many CIED complications.

OPINION ON THE PROGRAM

The MOL program is a special opportunity to get a deeper understanding about clinical research. It grants an excellent methodological support, with great e-learning materials, onsite courses, group meetings and an expert statistical team. In addition, inside the program many new relationships are born, which helps to build professional and social networks.

PUBLICATIONS AND PROJECTS

Ongoing projects

- The effect of different optimization techniques in patients with cardiac resynchronization therapy, a systematic review and network meta-analysis
 - The role of biomarkers in predicting cardiac implantable electronic device infection, a retrospective registry analysis
-



KINCŐ LŐRINCZ

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,
SEMMELWEIS UNIVERSITY

INTRODUCTION

Kincső completed her studies at the University of Medicine and Pharmacy of Targu Mures, and now is a first year PhD student in the Gynecology and urology group of the CTM, and her main fields of interest are pathological pregnancies, obstetric ultrasonography and obstetrical procedures. Her main research topic is the comparison of different cesarean section closure techniques.

OPINION ON THE PROGRAM

In the realm of healthcare, professionals must stay up to date with the latest advancements in their respective fields to provide the highest quality care to their patients. Staying current with the ever-expanding body of evidence in healthcare necessitates a deep understanding of the underlying science and the methodology of conducting different types of studies. The MOL program presents an excellent opportunity to acquire this type of knowledge. Beyond equipping participants with the skills needed to conduct rigorous medical research, the program offers valuable networking with the scientific community.



ADOLF LICHTFUSZ

HUNGARIAN DEFENSE FORCES MEDICAL CENTRE,
DEPARTMENT OF CARDIOLOGY

INTRODUCTION

Adolf, a recent graduate from the University of Medicine and Pharmacy of Targu Mures, currently working as a volunteer at the Medical Center - Hungarian Defence Forces Cardiology Department. His research field is focused on drug and non-pharmacological management strategies and diagnostic approaches for patients with heart failure. Additionally, he has a keen interest in the application of invasive cardiovascular techniques.

OPINION ON THE PROGRAM

I believe the MOL program is a fantastic opportunity for young healthcare professionals to stay up-to-date and excel in their fields. We get to work on our research projects with expert guidance and valuable peer feedback. This program equips us with strong research skills and opens doors for networking. In my opinion, the PhD program at translational medicine offers a hands-on experience, a supportive learning environment, and chances to present at conferences. It's truly an exceptional platform for advancing. In a nutshell, I think that the program empowers us to enhance patient care and contribute significantly to healthcare.



**LEARNING
BY DOING**

MOL PROGRAM

OF THE TRANSLATIONAL EDUCATION PROGRAMS



tmalapitvany



TMFoundationHQ



transmedkozpont

TM-CENTRE.ORG

SEMMELWEIS UNIVERSITY
CENTRE FOR TRANSLATIONAL MEDICINE