



A KÖZÖSSÉGÉRT
Alapítvány



LEARNING
BY DOING

MOL PROGRAM

OF THE TRANSLATIONAL EDUCATION PROGRAMS

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

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

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



SEMMEWEIS
UNIVERSITY 1769



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 MUREŞ

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

SEMMELEWIS 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



KINCSŐ 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.