

# Curriculum vitae

**Name:** Levente Kiss, MD, PhD

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**Language knowledge:**

hungarian (mother tongue), english (fluent), italian (intermediate)

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**SCOPUS:** 7201380635

**RESEARCHERID:** N-8009-2017

**Research Gate:**

[https://www.researchgate.net/profile/Levente\\_Kiss](https://www.researchgate.net/profile/Levente_Kiss)

**MTMT:** 10014625

**MTA (Hungarian Academy of Sciences) identifier:** 22543

## EDUCATION

**1994-1998:** Fazekas Mihály Grammar School, Budapest, Hungary

**1998-2004:** Semmelweis University Medical School, Budapest, Hungary

**2004-2009:** PhD School of Doctoral Studies, Semmelweis University.

## POSITIONS

**2008 - 2011** assistant professor at the Institute of Human Physiology and Clinical Experimental Research, Semmelweis University.

**2011 – 2020** senior assistant professor at the Institute of Human Physiology and Clinical Experimental Research, Semmelweis University, then from 2015 at the Department of Physiology, Semmelweis University

**2018-2019** - Appointed director of the Teaching Center at the Faculty of Medicine, Semmelweis University

**From 16<sup>th</sup> December 2019** - Director of the Center of Educational Development, Methodology and Organization Teaching, Semmelweis University

**From 15<sup>th</sup> March 2020** - Associate Professor at Department of Physiology, Semmelweis University

## FURTHER INSTITUTIONAL ROLES

**2009 November - 2013 September** Institutional student research officer

**From 2013 onwards** - Delegated member to represent the Semmelweis University at national and international meetings such as MELLearn (Hungarian Life long Learning Association) and GENiE (Perspectives on Education for Meeting the Needs of the Innovation Implementer) conferences.

**From 2015 September onwards-** Vice-officer for organizing laboratory practices

**From 2016 July onwards** - Member of the Quality Assurance Committee at the Faculty of Medicine

**From 2017 June onwards** - Delegated member at entrance examinations and at educational fairs

## MEMBERSHIP IN SCIENTIFIC SOCIETY:

Hungarian Biochemical Association, 2006-2008

Society of Hungarian Cardiologists, 2008-

Hungarian Society of Physiology, 2010-

Hungarian Society of Medical Education and Health Science, 2011-member; 2019 - secretary general

## TRAININGS

Basics of Animal Research, 2004

Ethics of Scientific Research, 2005

Molecular Biology, 2005

Technological Transfer, 2005

Industrial Laws Related to Research, 2006

Science and Project Management, 2006

Clinical Cardiovascular Physiology, 2006

Radiation Safety Orientation Training, 2006

Barrier Training, 2007

Comparative Medicine Resources Orientation for the Human Care and Use of Animals, 2006

Small Animal Research Training (mouse, rat), 2007

Euthanasia Training, 2007

Flow Cytometer Operator Course, Beckton Dickinson, San Jose, CA, USA, 2007

Educating the educators program, 2013

## LANGUAGE KNOWLEDGE

hungarian (mother tongue),

english (fluent),

italian (intermediate)

## MOST IMPORTANT AWARDS

1<sup>st</sup> prize, National Biology Contest, 1998

Semmelweis Merit prize for education and research, 2014

Semmelweis Excellent Mentor of Students' scientific work, 2017

Semmelweis Merit prize for education and research, 2017  
Semmelweis Merit prize for education and research, 2018  
Semmelweis Merit prize for education and research, 2019  
Semmelweis Pro Juventute Universitatis Award, 2020  
Semmelweis Excellent Teacher Award, 2020

## SUMMARY OF EDUCATIONAL ACTIVITIES

### **TEACHING**

**2000-2003:** Tutor aid in physiology for Hungarian medical students at the Institute of Human Physiology and Clinical Experimental Research, Semmelweis University

**2004-2015:** Teacher, lecturer and examiner in physiology for separate groups of Hungarian and English-speaking medical, dentist and pharmacologist students at the Institute of Human Physiology and Clinical Experimental Research, Semmelweis University

**From 2010 to 2014:** lectures in the compulsory subject "Basic knowledge of systems biology" for students of medical engineering at the Budapest University of Technology and Economics.

**2015-** Examiner of Hungarian and English-speaking medical, dentist and pharmacologist students at final exams in the Department of Physiology, Semmelweis University.

**2017-től:** Lectures on the MSc in Medical Biotechnology at the Faculty of Information Technology and Bionics of Pázmány Péter Catholic University, as well as the holding of colloquium and final examinations in the compulsory subject "Human Physiology".

### **EDUCATIONAL DEVELOPMENTS:**

#### **University level**

##### **Book chapters:**

Physiology laboratory book (Semmelweis Press): SimMuscle, EMG (Electromyography) and ECG (Electrocardiography) chapters, 2003

Developing new physiological practices for students at the Faculty of General Medicine, the Faculty of Pharmacy and the Faculty of Dentistry:

- Electromyography, 2013, 2014
- Respiratory sinus arrhythmia, 2013, 2014
- Electrocardiography, 2013, 2014
- Electroencephalography, 2013, 2014
- Electrooculography, 2013, 2014
- Examination of cardiac function, 2017
- Examination of reflex function, 2017

#### **National level**

- Proposals for the textbooks Attila Fonyó: Textbook of Medical Physiology, 2012, 2014, and Miklós Geiszt/Attila Geiszt Textbook of Medical Physiology, 2019.

- Development of the blended learning training course "Education of Teachers" of the Hungarian Medical Education and Health Education Society (MOEOT) in the framework of the project "Practice-oriented and student-friendly modernization of life science-clinical higher education for strengthening the international competitiveness of rural training

institutions", TÁMOP 4.1.1.C-13/1/KONV-2014-0001, in 2015 in cooperation with Dr. Katalin Barabás. Since then, the course has been running continuously under my leadership at Semmelweis University, and both the University of Szeged and the University of Debrecen have held training courses with my collaboration using the course. More information about the course:

<http://semmelweis.hu/oktatasmodeszertan/oktatok-oktatasa/>

- The aim of the project "Practice-oriented and student-friendly modernization of higher education in the life sciences and clinical sciences for strengthening the international competitiveness of rural training institutions", which is part of the project "TÁMOP 4.1.1.C-13/1/KONV-2014-0001", aimed at improving the quality assurance of education, was to prepare the foundations of a renewed training system that also takes into account the needs of students in the 21st century. The project, which was initiated by the University of Szeged, Faculty of Medicine and the Hungarian Society for Medical Education and Health Education, involved all national partners and the resulting study was designed to help harmonise and modernise quality assurance in medical education in Hungary.

- Proofreading of the teaching materials prepared by the University of Debrecen in the framework of the project "Practice-oriented and student-friendly modernisation of life science-clinical higher education to strengthen the international competitiveness of rural training institutions", TÁMOP 4.1.1.C-13/1/KONV-2014-0001.

### **International level**

- **MEDINE2** Work Package 5, Curriculum Trends in Medical Education in Europe in the 21st Century, 2012 Catherine Kennedy, Pat Lilley, Levente Kiss, Levente Littvay, Ronald Harden

A joint publication on curriculum trends in the 21st century with Dr Ronald Harden, former President and current Secretary General of AMEE (An International Association for Medical Education, <https://amee.org/home>), a leading figure in the international medical education literature.

- **CLILMED**: CLIL in Medical Education: Reaching for Tools to Teach Effectively in English in a Multicultural and Multilingual Learning Space. An Erasmus+ Strategic Partnership Project. The Project aimed to strengthen medical higher education institutions in preparing students to become qualified healthcare professionals. To do that, we aimed to increase the capacity of academic teachers teaching in English in the field of medical and healthcare sciences by encouraging them to concurrently teach their subject and increase the English language competencies of students through a CLIL approach. 2019-2022, <https://clilmed.eu/>

- **EUNIHULI**: "Instilling "Human Literacy" into our Educational Processes - Exploring new Territories in Academic Development" 2020-2022

The project aimed to approach human literacy as a counterbalance to the digitization of education. For two years, we organised workshops with teachers, students and support staff to address the issues of ethics, interpersonal communication, critical thinking, and cross-cultural agility.

### **EDUCATIONAL GRANTS:**

EIT Health and the Global Educators Network for Health Care Innovation and Entrepreneurship (GENiE), European Perspectives on Education for Meeting the Needs of

the Innovation Implementer, Barcelona, 2016. Representation of Semmelweis University at a conference to strengthen education for innovative approaches.

TÁMOP 4.1.1.C-13/1/KONV-2014-0001, "Practice-oriented and student-friendly modernization of life science-clinical higher education to strengthen the international competitiveness of rural training institutions" project.

MEDINE2 EUROPEAN ACADEMIC NETWORK IN MEDICAL EDUCATION, WP5, European Commission, Lifelong Learning Programme, 2009-2013, in the framework of the "Trends in Medical Education in Europe in the 21st Century".

## **PUBLICATIONS:**

### **Studies**

Catherine Kennedy, Pat Lilley, Levente Kiss, Levente Littvay, Ronald Harden  
Curriculum Trends in Medical Education in Europe in the 21st Century, 2012  
[http://semmelweis.hu/oktatasmodesztan/files/2018/08/DV5.18.1\\_CURRICULUM\\_TRENDS\\_FINAL\\_REPORT.pdf](http://semmelweis.hu/oktatasmodesztan/files/2018/08/DV5.18.1_CURRICULUM_TRENDS_FINAL_REPORT.pdf)

2015 MELLearn Conference Proceedings  
Kokovay Ágnes, Kiss Levente  
Training of trainers in Hungarian medical universities

2019 MELLearn Conference  
Katalin Monzöger, Ágnes Kokovay, Levente Kiss  
Supporting education at Semmelweis University - the role and tasks of the Centre for Educational Methodology

Levente Kiss, International trends in graduate medical education  
2019, Medical Education, Volume XCIV, Issue 3

Levente Kiss, Borbála Kozma, Katalin Monzöger, Árpád György Keskeny, Zsombor Mátyás Papp, Introduction and support of digital distance education at Semmelweis University in spring 2020, Medical Education 2021, Volume XCVI, Issue 2

Levente Kiss, Gergő Szanda: Experiences of digital distance education in the medical physiology subject, Medical Education. 2021, Volume XCVI, Issue 2.

Levente Kiss: Tiki-taka or catenaccio? - Aspects of curricular design in modern medical education, Medical Education. 2022, Vol. XCVII, No. 3.

van der Rijst R.M\*, King S, Monzeger K, Matthes J, Reneland-Forsman L, Kiss L, & Gelly-Guichoux S. Reappraise the value of human literacies in the age of transformation of higher education. International Journal for Academic Development, IJAD-2022-0208 (222863065) *under review*

### **Published abstract**

Levente Kiss Traditional medical curriculum in Semmelweis University  
ACTA PHYSIOLOGICA (ISSN: 1748-1708) (eISSN: 1748-1716) 211: (Suppl. s697) Paper S1-C1. (2014)

## Conferences:

*LXXVI. Forum of the Hungarian Society of Physiology, Debrecen, Hungary, 2012*

L Kiss

„Lessons from the AMEE conference 2011 in Vienna and the results of the MEDINE2 Curriculum Trends Survey”

FEPS (Federation of European Physiological Societies) Scientific Conference, Santiago de Compostela, September 8-12, 2012

T Ivanics, L Kiss

„Teaching Physiology in a traditional curriculum: pros”

*LXXVI. Forum of the Hungarian Society of Physiology, Budapest, Hungary, 2013*

Kiss L

„In competition for the time of our students” („Versenyben a hallgatók idejéért.”)

AMEE (Association for MEdical Education) konferencia, Prague (Czech republic), 25-28. August, 2013

Levente Kiss, Tamás Ivanics

“Evaluation of physiology teaching in a traditional curriculum in Hungary”

FEPS (Federation of European Physiological Societies) Conference, Teaching Symposium, 27-30., August, 2014, Budapest, Hungary

Levente Kiss

“Traditional Medical Curriculum in Semmelweis University”

AMEE (Association for MEdical Education) conference, Glasgow (Great Britain), 5-9. September, 2015

Levente Kiss, Katalin Barabás

„Establishment of blended learning teacher education program for new staff members at medical universities in Hungary”

FEPS (Federation of European Physiological Societies) conference, Paris, 2016. June 29-July 1

Levente Kiss

“Practical courses in the Medical Curriculum: pros and cons.”

FEPS (Federation of European Physiological Societies) conference, Vienna, 2017. September 13-15.

Levente Kiss

“Physiology in a classical curriculum in the 21st century: Flexner 2.0”

AMEE (Association for MEdical Education) conference, Helsinki, 2017. August 26-30.

Levente Kiss, Katalin Barabás

Experiences after the establishment of a blended learning teacher education program for new staff members at medical universities in Hungary

## SUMMARY OF PHYSIOLOGY RESEARCH ACTIVITIES

### SCIENTOMETRIC DATA (based on SCOPUS 05/02/2023):

Impact factor: 89,388

Independent and total citations: 1668 and 1972

Hirsch index, independent and total: 16 and 17

### CURRENT RESEARCH AREA:

The physiological and pathophysiological role of hydrogen sulfide in the cardiovascular system.

### MOST IMPORTANT PUBLICATIONS

1. Chun-Yang Xiao, Min Chen, Zsuzsanna Zsengellér, Hongshan Li, Levente Kiss, Márk Kollai, M.D and Csaba Szabó.: Poly (ADP-ribose) polymerase promotes cardiac remodeling, contractile failure and translocation of apoptosis-inducing factor in a murine experimental model of aortic banding and heart failure.

The Journal of Pharmacology and Experimental Therapeutics 2005 Mar; 312(3):891-8. IF: 4,098

2. Levente Kiss, Csaba Szabó.: The pathogenesis of diabetic complications: the role of DNA injury and poly(ADP-ribose) polymerase activation in peroxynitrit-mediated cytotoxicity.

Memórias do Instituto Oswaldo Cruz, 2005 Mar;100 Suppl 1:29-37 IF: 0,847

3. Lacza Z, Pankotai E, Csordas A, Gero D, Kiss L, Horvath EM, Kollai M, Busija DW, Szabo C. : Mitochondrial NO and reactive nitrogen species production: does mtNOS exist?

Nitric Oxide, 2006 Mar;14(2):162-8 IF: 2,509

4. Levente Kiss, Min Chen, Domokos Gerő, Katalin Módis, Zsombor Lacza, Csaba Szabó: Effects of 7-ketocholesterol on the activity of endothelial poly (ADP-ribose) polymerase (PARP) and on endothelium-dependent relaxant function.

International Journal of Molecular Medicine, 2006 Dec; 18(6):1113-7. IF: 1,854

5. Elrod JW, Calvert JW, Morrison J, Doeller JE, Kraus DW, Tao L, Jiao X, Scalia R, Kiss L, Szabo C, Kimura H, Chow CW, Lefer DJ.: Hydrogen sulfide attenuates myocardial ischemia-reperfusion injury by preservation of mitochondrial function.

Proc Natl Acad Sci U S A. 2007 Sep 25;104(39):15560-5. IF: 9,598

6. Esechie A, Kiss L, Olah G, Horváth EM, Hawkins H , Szabo C, Traber DL: Protective effect of hydrogen sulfide in a murine model of combined burn and smoke inhalation-induced acute lung injury.

Clin Sci (Lond). 2008 Aug;115(3):91-7. IF: 4,187

7. Kiss L, Deitch EA, Szabó Cs: Hydrogen sulfide decreases adenosine triphosphate levels in aortic rings and leads to vasorelaxation via metabolic inhibition.

Life Sci., 2008, Oct 24;83(17-18):589-94. IF: 2,583

8. Cselenyák A, Pankotai E, Horváth EM, Kiss L, Lacza Z: Mesenchymal stem cells rescue cardiomyoblasts from cell death in an in vitro ischemia model via direct cell-to-cell connections. BMC Cell Biology 2010 Apr 20; 11:29 IF: 2,464
9. Dongó E, Hornyák I, Benkő Z, Kiss L: The cardioprotective potential of hydrogen sulfide in myocardial ischemia/reperfusion injury. Acta Physiol Hung., 2011 Volume 98 (4), pp. 369-381 IF: 0,821
10. Pankotai E, Cselenyák A, Rátosi O, Lőrincz J, Kiss L, Lacza Z: The role of mitochondria in direct cell-to-cell connection dependent rescue of postischemic cardiomyoblasts. Mitochondrion. 2012 Mar;12(2):352-6., IF: 4,025
11. Szepes M, Janicsek Z, Benkő Z, Cselenyák A, Kiss L. Pretreatment of therapeutic cells with poly(ADP-ribose) polymerase inhibitor enhances their efficacy in an in vitro model of cell-based therapy in myocardial infarct. Int J Mol Med. 2013 Jan;31(1):26-32. doi: 10.3892/ijmm.2012.1186. IF: 1,880
12. Szepes M, Benkő Z, Cselenyák A, Kompisch KM, Schumacher U, Lacza Z, Kiss L. Comparison of the direct effects of human adipose- and bone-marrow-derived stem cells on postischemic cardiomyoblasts in an in vitro simulated ischemia-reperfusion model. Stem Cells Int. 2013;2013:178346. doi: 10.1155/2013/178346. Epub 2013 Jun 19. IF: 2,806
13. Dongó E, Benkő Z, Csizmazia Á, Marosi G, Grottke A, Jücker M, Schumacher U, Kiss L. H<sub>2</sub>S preconditioning of human adipose tissue-derived stem cells increases their efficacy in an in vitro model of cell therapy for simulated ischemia. Life Sci. 2014 Sep 15;113(1-2):14-21. (IF: 2,296)
14. Dongó E, Beliczai-Marosi G, Dybvig AS, Kiss L The mechanism of action and role of hydrogen sulfide in the control of vascular tone. Nitric Oxide. 2018 Dec 1;81:75-87. doi: 10.1016/j.niox.2017.10.010. Epub 2017 Oct 31. (IF: 4,181)
15. Dongó E, Kiss L The Potential Role of Hydrogen Sulfide in the Regulation of Cerebrovascular Tone Biomolecules, 2020 Dec 16;10(12):1685. doi: 10.3390/biom10121685. (IF: 4,57)

## **RESEARCH GRANTS:**

### **Awarded grants**

Hungarian Academy of Sciences, BO/00470/14 Bolyai János Research Fellowship, 2014-2017, The role of sphingolipid mediators and hydrogen sulphide in the regulation of vascular tone in physiological and diabetic states. 4 482 thousand HUF.

National Scientific Research Fund Programme, PD-OTKA 83803, 2010-2013, Mechanisms and enhancing the efficacy of cell-based therapies for heart disease: the role of cell-cell interactions, homing and pretreatment.

### **Participation in grants**

National Research, Development and Innovation Office, FK124038, Principal investigator: Dr. Gergő Szanda, 2017-2020

Investigation of the interactions of signalling pathways involved in the regulation of nutrient uptake and energy metabolism.

National Scientific Research Fund Programme, K-OTKA 115607,  
Principal investigator: Dr. Attila Szijártó, 2015-2019  
Innovations in liver surgery. Experimental and clinical investigation of programmed liver regeneration. 32 362 thousand HUF

National Scientific Research Fund Programme, K-OTKA 112964,  
Principal investigator: Dr. Zoltán Benyó, 2015-2018  
Maturational effects of sphingolipid mediators. 29 808 thousand Ft

COST (European Cooperation in Science & Technology) BM1005  
Chair of the Action: Dr. Andreas Papapetropoulos, 2011-2015  
Gasotransmitters: from basic science to therapeutic applications. 87 000 EUR

TÁMOP-4.2.1/B 09/1/KMR-2010-0001  
Project Manager: Vácziné Dr. Takács Zita, 2010-2012  
Modern Medical Technologies at Semmelweis University. Improvement of the quality of higher education through research-development-innovation-education.

NKTHA\*STAR (Singapore) (TÉT)  
Project leader: Dr. Zsombor Lacza, 2009-2012  
Development of new cell therapy therapeutic methods and applications. 60 506 thousand HUF

TÁMOP-4.2.2/08/1/KMR-2008-0004,  
Project Manager: Dr. Béla Merkely, 2008-2010  
Semmelweis Bridge project. Support for projects of innovative research teams from basic to applied research. 609 206 thousand HUF

NK49488 Principal investigator: Dr. Csaba Szabó, 2005-2009  
The role of nitrosative stress in the regulation of the cardiovascular system. 35 100 thousand Ft.

#### **INTERNATIONAL RESEARCH EXPERIENCE:**

2005. April-June  
Trainee assistant at Inotek Pharmaceutical Corporation (Beverly, MA, USA) under the supervision of Csaba Szabó (MD, PhD, CSO).

2006. September – 2007. October  
Post-Doc fellow at the Department of Surgery of the University of Medicine and Dentistry of New Jersey (Newark, NJ, USA) under the supervision of Csaba Szabó (MD, PhD).

#### **PRINCIPAL INVESTIGATOR:**

##### **PhD principal investigator, supervisor**

Two PhD-students have achieved their PhDs under my supervision: Dr. Zsolt Benkő, 2015, Dr. Eleni Dongó, 2022.

##### **Student research, principal investigator, mentor**

At Semmelweis University, I have been working as a TDK topic leader at the Institute of Clinical Experimental Research and Human Biology since 2004, and at the Institute of Biology since 2015, during which I have worked with 23 TDK students, resulting in 12 theses, 3 rectoral proposals, 17 presentations at university TDK conferences (three 1st prizes, four 2nd prizes, three 3rd prizes), 3 OTDK presentations (one 1st prize, one 2nd prize, one special prize). Two of my TDK students have received awards for first-authored publications in international impact factor journals already during their university years. In 2017, I was awarded the "Outstanding Student Researcher" prize.

## **REVIEWER ACTIVITIES**

### **International grants**

FUTURO IN RICERCA 2012,  
PROGRAMMI DI RICERCA SCIENTIFICA DI RILEVANTE INTERESSE NAZIONALE, 2012,  
VQR2011-2014, (Italian Ministry for Education, University and Research)  
VQR2015-2016, (Italian Ministry for Education, University and Research)  
PRIN2016, (Italian Ministry for Education, University and Research)

### **International scientific journals**

- Acta Physiologica Hungarica, Physiology International
- Micron
- Tissue Engineering
- Pharmacological Reports

### **National grants**

PD-OTKA 2014, 2015, 2017  
K-OTKA, 2017-

### **Further work such as:**

- institutional reviewer of 10 PhD-theses
- exam committee member 6 times
- Opponent in 5 PhD defenses

## **SYMPOSIUM ORGANISATION**

LXXXth Meeting of the Hungarian Society of Physiology Pécs, 1-4 June 2016.  
H2S Symposium, President: Dr. Levente Kiss

## **THIRD MISSION RELATED ACTIVITIES**

Participation in Researchers' Night, a programme for the wider audience of the public to promote understanding of research: 7 times between 2009 and 2018.

Budapest, 05/02/2023

Levente Kiss, MD, PhD