

Curriculum vitae

Name: László Csanády

Education/Degrees:

2016 Hungarian Academy of Sciences: D.Sc. (2016)
1995-2000 The Rockefeller University, New York: biophysics/physiology, Ph.D. (2000)
1989-1995 Semmelweis University Medical School, Budapest: medicine, M.D. (1995)

Positions and Employment:

Semmelweis University, Institute of Biochemistry and Molecular Biology
2020- Director
Semmelweis University, Department of Biochemistry
2020- Department Head
2018- Professor
2009-2018 Associate Professor
2007-2009 Assistant Professor
2003-2007 Instructor
2000-2003 Postdoctoral fellow

Professional Memberships:

Biophysical Society (member since 1997)
Elife (member of Board of Reviewing Editors since 2017)
Journal of General Physiology (member of Editorial Advisory Board since 2023)

Peer Review Work:

Journals: *Journal of General Physiology*, *Journal of Physiology*, *British Journal of Pharmacology*,
Journal of Biological Chemistry, *Proc Natl Acad Sci USA*, *Nat Commun*, *Elife*
Funding agencies: *Cystic Fibrosis Trust*, *Wellcome Trust*, *Hungarian Scientific Research Fund*

Awards and Honors:

2023 Talent Award (National Biomedicine Foundation)
2021 Széchenyi Award (State of Hungary)
2018 Merit Award (Semmelweis University)
2017 Academy Award (Hungarian Academy of Sciences)
2016 Merit Award (Semmelweis University)
2016 Doctor of the Hungarian Academy of Sciences (Hungarian Academy of Sciences)
2015 Paul Cranefield Award (Society of General Physiologists)
2014 Merit Award (Semmelweis University)
2014 Distinguished Teacher Award (Semmelweis University)
2013 Habilitation (Semmelweis University)
2012 Merit Award (Semmelweis University)
2012 International Early Career Scientist Award (Howard Hughes Medical Institute)
2010 János Bolyai Research Fellowship (Hungarian Academy of Sciences)
2008 Tivadar Huzella Award (Semmelweis University)
2006 János Bolyai Research Fellowship (Hungarian Academy of Sciences)
2006 Gedeon Richter Research Career Award
1999 Gosau Young Investigator Award (FEBS Advanced Lecture Course)
1992-95 Fellowship of the Hungarian Republic

Ten most important publications:

1. Bartók, Á, **Csanády, L.** 2022. Dual amplification strategy turns TRPM2 channels into supersensitive central heat detectors. *Proc. Natl. Acad. Sci. U.S.A.* 119: e2212378119.
2. Simon, M.A, **Csanády, L.** 2021. Molecular pathology of the R117H cystic fibrosis mutation is explained by loss of a hydrogen bond. *Elife* 10: pii: e74693.
3. Mihályi, C., Iordanov, I., Töröcsik, B., **Csanády, L.** 2020. Simple binding of protein kinase A, prior to phosphorylation, allows CFTR anion channels to be opened by nucleotides. *Proc. Natl. Acad. Sci. USA.* 117:21740-21746.
4. **Csanády L.**, Töröcsik, B. 2019. Cystic fibrosis drug ivacaftor stimulates CFTR channels at picomolar concentrations. *Elife* 8. pii: e46450.
5. Zhang Z, Tóth B, Szollosi A, Chen J, **Csanády L.** 2018. Structure of a TRPM2 channel in complex with Ca²⁺ explains unique gating regulation. *Elife* 7. pii: e36409.
6. Liu F, Zhang Z, **Csanády L.**, Gadsby DC, Chen J. 2017. Molecular structure of the human CFTR ion channel. *Cell* 169:85-95.
7. Sorum, B, Czege, D, **Csanády, L.** 2015. Timing of CFTR Pore Opening and Structure of Its Transition State. *Cell* 163, 724-733.
8. Tóth, B., Iordanov, I., **Csanády, L.** 2014. Putative chanzyme activity of TRPM2 cation channel is unrelated to pore gating. *Proc. Natl. Acad. Sci. USA.* 111:16949-16954.
9. Tóth B, **Csanády L.** 2012. Pore collapse underlies irreversible inactivation of TRPM2 cation channel currents. *Proc. Natl. Acad. Sci. USA.* 109:13440-13445.
10. **Csanády, L.**, Vergani, P., Gadsby, D.C. 2010. Strict coupling between CFTR's catalytic cycle and gating of its Cl⁻ ion pore revealed by distributions of open channel burst durations. *Proc. Natl. Acad. Sci. USA.* 107:1241-1246.

Ongoing research support:

2022-2027: NRDIO Forefront Research Excellence Programme

2022-2027: HUN-REN-SE, Ion Channel Research Group

2019-2024: Hungarian Center of Excellence for Molecular Medicine Research Group Leader

Completed research support:

2021-2023: Cystic Fibrosis Foundation Research Grant

2017-2022: Hungarian Academy of Sciences Momentum Award

2019-2021: Cystic Fibrosis Foundation Research Grant

2017-2019: Cystic Fibrosis Foundation Research Grant

2012-2017: Howard Hughes Medical Institute International Early Career Scientist Award

2015-2017: Cystic Fibrosis Foundation Research Grant

2012-2017: Hungarian Academy of Sciences Momentum Award

2010-2015: National Institutes of Health Research Grant (R01)

2007-2011: Wellcome Trust Project Grant

2007-2011: Fogarty International Research Collaboration Award Basic Biomedical (FIRCA-BB)