

Rohacsti.cvm, Rohacs, Tibor

CURRICULUM VITAE

DATE: 07/26/2017

NAME: Tibor Rohacs

PRESENT TITLE: Professor

HOME ADDRESS: 26 Leicester Ct, Princeton NJ 08540

OFFICE ADDRESS: MSB H631

TELEPHONE NUMBER/E-MAIL ADDRESS: 973-972-4464 (o), rohacsti@njms.rutgers.edu or tibor.rohacs@rutgers.edu

CITIZENSHIP: USA / Hungary

EDUCATION:

- A. Undergraduate Graduate and Professional
Semmelweis University of Medicine, Budapest, Hungary
M.D. September 1992
- B. Graduate and Professional
Semmelweis University of Medicine Budapest, Hungary
Ph.D. April 1997

POSTGRADUATE TRAINING:

- A. Internship and Residencies
 - Location*
 - Discipline*
 - Inclusive Dates*
- B. Research Fellowships
Columbia University, NY,
Molecular Cardiology Program
1997 July –1998 June
- C. Postdoctoral Appointments
Mount Sinai School of Medicine, NY
Physiology and Biophysics
1998 Aug- 2002 June

MILITARY:

Hungarian National Army
June 1994 - February 1995

ACADEMIC APPOINTMENTS:

Department of Physiology and Biophysics
Mount Sinai School of Medicine, New York, NY
Instructor
2002 July 1st - 2005 March 31st

Department of Pharmacology and Physiology
UMDNJ New Jersey Medical School, Newark, NJ
Assistant Professor, tenure track
2005 April 1st – 2011 June 30

Department of Pharmacology and Physiology
UMDNJ New Jersey Medical School, Newark, NJ
Associate Professor with tenure
2011 July 1st – 2013 June 31

Department of Pharmacology and Physiology
Rutgers New Jersey Medical School, Newark, NJ
Associate Professor with tenure
2013 July 1st – 2015-June 30

Department of Pharmacology, Physiology and Neuroscience
Rutgers New Jersey Medical School, Newark, NJ
Professor with tenure
2015 July 1st – present

HOSPITAL APPOINTMENTS: *N/A*

OTHER EMPLOYMENT OR MAJOR VISITING APPOINTMENTS:

Visiting Fellow: University of Padua, Italy, Tullio Pozzan's laboratory (02/1993)

Visiting Fellow, National Institutes of Environmental Health Sciences (NIEHS) James Putney's laboratory (02/96 – 03/96)

PRIVATE PRACTICE *N/A*:

LICENSURE: *N/A*

DRUG LICENSURE: *N/A*

CDS: *#/expiration*

DEA: *#/expiration*

CERTIFICATION: *N/A*

MEMBERSHIPS, OFFICES AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES:

Hungarian Physiological Society, Member since 1992

Biophysical Society, Member since 1998

Society for Neuroscience, Member since 2008

American Society for Biochemistry and Molecular Biology (ASBMB) member since 2013

Society of General Physiologists, member since 2014

HONORS AND AWARDS:

1986: National (Hungarian) High School Competition in Biology: 1st prize

Research student conferences,

1991, 1st prize, Budapest Competition

1991, 3rd prize, National Competition, Hungary
1992, 2nd prize, Budapest Competition
1992, 1st prize, National Competition, Hungary

Scholarship of the Republic of Hungary (1990-1992)

1993 Pro Scientia Gold Medal: awarded every second year to 4-6 medical students for outstanding scientific activity (out of all the students of the 4 medical schools of Hungary)

Soros Foundation 1993, support for short study trip to Padova, Italy (Tullio Pozzan's laboratory)

Soros Foundation 2 month fellowship, 1996 (J.W.Putney's laboratory)
National Institute of Environmental Health Sciences, USA, NC

Hungarian National Science Foundation
Young Investigator Grant: 1996-97

Eötvös Fellowship from the Hungarian Ministry of Education to support fellowship at Columbia University 1997

Nominated for Golden Apple teaching award, 2009 NJMS
Nominated for Golden Apple teaching award, 2015 NJMS

BOARDS OF DIRECTORS/TRUSTEES POSITIONS:

SERVICE ON NATIONAL GRANT REVIEW PANELS, STUDY SECTIONS, COMMITTEES:

ad hoc reviewer for NIH: ZRG1 MDCN-G(91) Special Emphasis Review Committee, teleconference (10/29/2007) "Drug Design for the Neurological Sciences"

ad hoc reviewer for NSF: Signal Transduction, Molecular and Cellular Biosciences, 2008 October and 2009 March

Temporary member of NTRC study section (NIH), 2009, February and October meetings

Ad hoc, mail reviewer, ZRG1 MDCN A (NIH, challenge grants), 2009

NIH Special Emphasis Panel (SEP, MDCN-A(05)M) teleconference, March 2011

NIH Special Emphasis Panel (ZRG1 MDCN-N 04) teleconference, June 2012

Temporary member of BPNS study section (NIH), 2014 October,

Ad hoc member NIH, DSR Study Section 2015 February

Temporary member of BPNS study section (NIH), 2016 February & October

Temporary member of SYN study section (NIH), 2017 February

Temporary member of 2017/10 ZGM1 TWD-B (KR) Special Emphasis panel for K99/R00 grants (NIH), 2017 July

SERVICE ON MAJOR COMMITTEES:

A. International (*Name, Inclusive Dates*)

Ad hoc reviewer for Biotechnology and Biological Sciences Research Council – BBSRC, England, UK (2010)

Ad Hoc reviewer for the Medical Research Council (MRC), England, UK (2013)

Ad Hoc reviewer for the Medical Research Council (MRC), England, UK (2014)

B. National (*Name, Inclusive Dates*)

C. Medical School/University (*Name, Inclusive Dates*)

Member of the Institutional Animal Care and Use Committee (IACUC) from 2009 September till 2011 August

Member M.D. Ph.D. Admission committee, 2011-

Member: NJMS Strategic Plan Steering Committee Work Group assigned to assess faculty recruitment, retention and leadership 2011-2012

Member: Faculty Committee on Appointments and Promotions (FCAP), 2012-2014

Grant Reviewer for Foundation of UMDNJ Annual Grant Program 2012, 2013

Rutgers, NJMS Deans Biomedical Research Program Grant Reviewer 2014-

Leader of Renal Group, NJMS Curriculum Renewal Taskforce, Organ Systems-based Integrated Curriculum Workgroup, 2013-2016

Member: Pre-Clerkship Curriculum Advisory Committee: 2015-

Member of the Seminar committee of the Brain Health Institute representing NJMS, 2015 –

Faculty Council At-large representative, 2017-

D. Hospital (*Name, Inclusive Dates*)

E. Department (*Name, Inclusive Dates*)

2006 Ph.D. thesis advisory committee member: Nicola Pierobon (UMDNJ - NJMS)

2006 Ph.D. thesis defense committee member: Nicola Pierobon (UMDNJ - NJMS)

2006 Qualifying exam committee member: Jorge Gonzales (UMDNJ - NJMS)

2009 Qualifying exam committee, Guoqiang Wang (UMDNJ - NJMS)

2009-12 Ph.D. thesis advisory committee member: Jorge Gonzales (UMDNJ - NJMS)

2012 Qualifying exam committee, Ishwarya Murali (UMDNJ, NJMS)

2012- Ph.D. thesis advisory committee member: Thomas Comollo (UMDNJ - NJMS)

2013 PhD Thesis Defense Committee: Hatouf Sukkarieh (Rutgers - NJMS)

2014- PhD Thesis advisory committee member: Ishwarya Murali (Rutgers - NJMS)

2015- Ph.D. thesis defense committee member: Thomas Comollo (Rutgers - NJMS)

2006-2015 Seminar Coordinator of Departmental and CBNP track seminars

F. Editorial Boards (*Journal Name, Inclusive Dates*)

Assistant Editor, Mount Sinai Journal of Medicine, 2002-2007

Editorial Board Member: Pflugers Archive, European Journal of Physiology 2009-

Editorial Board Member Journal of Biological Chemistry, 2013 July -

G. *AdHoc* Reviewer (*Journal Name, Inclusive Dates*)

Acta Physiologica, ACS Chemical Neuroscience, American Journal of Physiology, BBA Biomembranes, BBA - Molecular and Cell Biology of Lipids, Biophysical Journal, British Journal of Pharmacology, Cell Calcium, CNS Neurol Disord Drug Targets, eLife, EMBO Journal, European Journal of Cell Biology, Journal of Biological Chemistry, Journal of Chemical Information and Modeling, Journal of General Physiology, The Journal of Neuroscience, Journal of Physiology, JPET, Journal of Visualized Experiments, Molecular and Cellular Endocrinology, Nature Chemical Biology, Nature Communications, Nature Neuroscience, Nature Reviews Neuroscience, Pflügers Archive, Pharmacological Research, PLoS ONE, PNAS, Scientific Reports

SERVICE ON GRADUATE SCHOOL COMMITTEES:

2008 PhD Thesis Committee, Lin Ling: (Columbia University NY, NY)
2010 Masters Thesis Committee member: Maria Romeo (UMDNJ - NJMS)
2010- Ph.D. thesis advisory committee member: Adetola Shodeinde (UMDNJ - NJMS)
2012 Ph.D. Thesis Committee Leila Mady (UMDNJ, NJMS)
2012 Connie Hsaio Masters Thesis Committee (UMDNJ, NJMS)
2013 Ph.D. thesis defense committee member: Adetola Shodeinde (UMDNJ - NJMS)
2014 Qualifying exam committee member: Brianna Lutz (Rutgers NJMS CBNP track)
2015 Qualifying exam committee member: Prerna Nepali (Rutgers NJMS CBNP track)
2015 Ph.D. thesis defense committee member: Prerna Nepali (Rutgers NJMS CBNP track)
2016 Qualifying exam committee member: Joon Ho Seo (Rutgers NJMS CBNP track)
2016 Ph.D. thesis defense committee member: Danielle Gregor (Rutgers NJMS CBNP track)
2016 Qualifying exam committee member: Michelle Favre (Rutgers NJMS CBNP track)
2016 Ph.D. thesis defense committee member: Brianna Lutz (Rutgers NJMS CBNP track)
2016 Qualifying exam committee member: Juan Valdez Capuccino (Rutgers NJMS CBNP track)
2017 Ph.D. thesis defense committee member: Veronika Khariv (Rutgers NJMS CBNP track)

SERVICE ON HOSPITAL COMMITTEES:

SERVICE TO THE COMMUNITY:

SPONSORSHIP OF CANDIDATES FOR POSTGRADUATE DEGREE:

Brianna Lutz, NRSA predoctoral fellowship: Epigenetic mechanism of nerve injury-induced Kv1.2 downregulation in DRG neurons, co-sponsor with Yuanxiang Tao, Department of Anesthesiology,

John del Rosario, NRSA predoctoral fellowship: Regulation of Piezo2 Channels by Ca²⁺-Sensitive Signaling Pathways, 2017/09/02- 2020/03/01

SPONSORSHIP OF POSTDOCTORAL FELLOWS:

TEACHING RESPONSIBILITIES: (Teaching effectiveness should be addressed in nominating letter)

- A. Lectures or Course Directorships
School, course name, lecture title, hours

Semmelweis University, 1996-1997:

Medical and Dental Physiology

Lectures in: Hemostasis (platelet function and blood clotting), cardiac cycle, cerebellar function, physiology of sleep and arousal, auditory physiology, thyroid hormones

Mount Sinai School of Medicine 2000

Ion Channel Course for graduate students,

Two lectures about intracellular Ca²⁺ release channels and fluorescence based calcium concentration measurements

Mount Sinai School of Medicine, 2003- 2005
Medical Physiology Course,
Seven lectures in Endocrinology: Introduction to Endocrinology, Pituitary hormones, Thyroid hormones, Adrenal hormones (2 lectures), Pancreatic hormones, Hormones of calcium homeostasis

Mount Sinai School of Medicine, 2005, 2007, 2009
Advanced Signal Transduction course
Lecture (2 hours) on TRP channels

UMDNJ – NJMS / Rutgers NJMS, 2008- 2015
Medical Physiology (ISF) course
Leader of the Kidney Physiology block: 7 lectures, coordination of problem based learning modalities, small group discussions, and exam review. Lectures: Introduction and body fluids, Glomerular Filtration, Sodium Balance, Water Balance, Disturbances of sodium and water balance, Calcium, potassium and magnesium balance, Secretion and HCO_3^- balance

UMDNJ – NJMS, 2009- 2011
Physiologic Principles, graduate course
Kidney Physiology, Sixteen contact hours (2 x 2 hours per week for 4 weeks)

UMDNJ-NJMS / Rutgers NJMS, 2012 – present
Molecular Physiology of Cell Communication
Ligand gated ion channels 2 hours

Rutgers NJMS, 2014-
Fundamentals of Human Physiology, Masters and PhD course
Block leader of Kidney Physiology, 6 lectures

Rutgers NJMS, 2014-
Lecturer in the "Protein Dynamics in Health and Disease" course for graduate students

Rutgers NJMS, 2014-
Grant Writing Course for CBNP track Graduate Students,

Rutgers NJMS, 2016-
Organ System-based curriculum for Medical Students:
Course director of the Renal block: 8 lectures, coordination of problem based learning modalities, small group discussions, and exam review. Lectures: Introduction to the course, Body fluids and clearance, Glomerular Filtration, Sodium Balance, Water Balance, Disturbances of sodium and water balance, Calcium, potassium and magnesium balance, Secretion and HCO_3^- balance

B. Research Training

Post Doctoral Fellows: *name, dates (inclusive) of training*

Eleonora Zakharian: 2005 – 2012, currently Assistant Professor, University of Illinois
Baskaran Thyagarajan: 2005 – 2007, currently Assistant Professor, University of Wyoming
Yevgen Yudin: November 2007 – present
Istvan Borbiri, 2011- 2016
Phanindra Velisetty 2014 – 2015
Pierre-Antoine Crassous, 2017-

Pre Doctoral Students: *name, dates (inclusive) of training*

Predocctoral Students Supervised at Semmelweis University

Ferenc Deak 1991 September -1992 June
Kalman Tory 1995 September -1997 June
Andras Dobos 1996 September -1997 June

Predocctoral Students Supervised at Mount Sinai

Pavan Ramdya 2001 June – 2001 Aug
Zoltan Molnar 2002 June – 2002 Aug
Viktor Lukacs 2004 June – 2004 Aug

Rotation PhD Students UMDNJ / Rutgers

Sara Gil Mast rotating graduate student (2007)
Weiwei Wang, rotating graduate student (2009)
Ishwarya Murali, rotating graduate student (2012)
Mahamaya Bhattacharyya rotating graduate student (2012)
Lun Li, rotating graduate student (2014)
John Del-Rosario, rotating graduate student (2014)
Aysenur Yazici, rotating graduate student 2016
Azadeh Nasuhidenahvi, 2017
Siyuan Zhao 2017
Nawoo Kim, 2017

Thesis Students UMDNJ / Rutgers

Viktor Lukacs: 2008 Sept – 2013 July (Currently Postdoc at Scripps Research Institute)
Chike Cao 2008 Sept – 2013 March (Currently Postdoc at Duke University)
Doreen Badheka, thesis phase graduate student 2011- present
Luyu Liu, thesis phase graduate student 2012 - present
John Del-Rosario, thesis phase graduate student 2015-
Aysenur Yazici, 2016- present
Siyuan Zhao 2017- present

Other pre-doctoral students

Elizabeth Bailey summer undergraduate student (2006)
Anna Maria Saquibal MS student (2008)
Esseim Sharma, summer Medical Student (2012)
Jan-Michael Rives, Masters Student (2013-14)
Shannan Hill, rotating Masters Student (2014)
Navanethan Vaikunthan, Summer High School Student (2013)

CLINICAL RESPONSIBILITIES: None

GRANT SUPPORT: *(Please list newest or most current first)*

A. Principal Investigator

Current grant support

2 R01 GM093290-06A1, PI: Rohacs, T; Carnevale, V.
Source: National Institutes of Health (NIGMS)
Regulation of the Intestinal Ca²⁺ Channels TRPV6

Duration: 01/02/2017 – 01/31/2021 207,429 / year direct costs to TR
\$416,859 / year total costs

2-R01-NS055159-08 PI: T. Rohacs,
Source: National Institutes of Health (NINDS),
“Lipid Regulation of Transient Receptor Potential Channels”
09/16/2013- 06/30/2018 \$218,750 / year direct cost
In no cost extension, renewal submitted

Developing peripherally acting GABAB receptor agonists
New Jersey Health Foundation
PI: Rohacs, Freundlich
\$35,000
03/01/2017-02/28/2018

Past Grants

2-R01-NS055159-08S1 PI: T. Rohacs
Source: National Institutes of Health (NINDS),
“Lipid Regulation of Transient Receptor Potential Channels”
08/01/2015- 06/30/2017 \$43,984 / year direct cost
Diversity Supplement to support the salary of John del Rosario

1 R01 GM093290
Source: National Institutes of Health (NIGMS)
Regulation of the Intestinal Ca²⁺ Channels TRPV6
Duration: 04/01/2011 – 03/31/2017 190,000 / year direct costs

GM093290-05S1
Source: National Institutes of Health (NIGMS)
Regulation of the Intestinal Ca²⁺ Channels TRPV6
Duration: 06/30/2016- 06/30/2017 \$63,333 direct cost
Bridge supplement

Single Investigator Award, Source: UMDNJ Foundation
“Regulation of the novel mechanosensitive piezo channels”
April 2013 - March 2014 \$25,000 for one year

1R01NS055159
Source: National Institutes of Health (NINDS)
“Lipid Regulation of Transient Receptor Potential Channels”
July 1 2007 - May 31 2012,
218,750 / year direct costs \$341,250 total / year

UMDNJ Foundation Multi PI grant with Sylvia Christakos
Regulation of the intestinal Ca²⁺ channel TRPV6 by calcium binding proteins
08/01/2008 – 07/31/2009
\$17,800 / 1 year for each lab

Sinsheimer Scholar Award
Source: Alexander and Alexandrine Sinsheimer Fund
“Desensitization of the pain sensor TRPV1 channels through phospholipase C activation”
Starting date: July 1 2006 - June 31 2009

total direct costs \$50,000 x 3 = 150,000

Single Investigator Award
Source: UMDNJ Foundation
“Direct regulation of phospholipase C by calcium channels”
July 1 2006 - June 30 2007
\$50,000 for one year

American Heart Association, Scientist Development Grant
“Growth factor regulation of inwardly rectifying K⁺ channels through phosphoinositide-3-kinases”
January 01, 2003 - December 31, 2006
direct: 59,091 x 4 = \$ 236,364
total: 65,000 x 4 = \$ 260,000

National Institutes of Health, National Research Service Award, Individual Postdoctoral Fellowship (F32)
1F32GM020856-01
“Detecting conformational changes in GIRK channels”
\$ 45,560
03/01/2001 – 02/28/2002

Revson Foundation, Postdoctoral fellowship,
“Detecting conformational changes in K⁺ channels using fluorescence spectroscopy”
07/01/2000 - 02/28/2001
03/01/2002 - 06/30/2003
\$70,000

B. Co-Investigator

1R01GM087369-01A1
“Functional Analysis of Pirt and Pirt2: novel regulators of TRP channels”,
PI: Xinzhong Dong, Johns Hopkins University
Duration: Aug 1 2010- July 31 2014
Rohacs: co-PI, 8% effort (1 calendar month), \$30,000 / year direct cost to T.R.

C. Pending

2R01NS055159-10A1, National Institutes of Health, PI: T. Rohacs
Regulation of sensory TRP channels by phospholipids and G-proteins
04/18/2018 - 03/31/2023
This grant was submitted in July 2017, it is a resubmission of the renewal effort for R01NS055159-09, which received 32 percentile in the first round, result pending
Total costs: 456,508 for year 1, pending

1S10OD025182-01, National Institutes of Health, PI: T. Rohacs
High End Instrumentation Grant – Rohacs, \$1,165,234
Result pending

PUBLICATIONS: *(Please list newest or most current first; published or accepted for publication only; should be segregated into the following categories)*

A. Refereed Original Article in Journal

1. A. Spät, I. Balla, T. Balla, P. Enyedi, G. Hajnóczky, and **T. Rohács:** Sustained stimulation of aldosterone production by angiotensin II is potentiated by nickel. *Am. J. Physiol.* 258: E555-E561, 1990

2. L. Hunyady, **T. Rohács**, A. Bagó, F. Deák, and A. Spät: Dihydropyridine-sensitive initial component of the ANG II-induced Ca^{2+} response in rat adrenal glomerulosa cells. *Am. J. Physiol.* 266: C67-C72, 1994
3. **T. Rohács**, A. Bagó, F. Deák, L. Hunyady, and A. Spät: Capacitative Ca^{2+} influx in adrenal glomerulosa cells. Possible role in angiotensin II response. *Am. J. Physiol.* 267: C1246-C1252, 1994
4. A. Spät, **T. Rohács** and L. Hunyady: Plasmalemmal dihydropyridine receptors modify the function of subplasmalemmal inositol 1,4,5-trisphosphate receptors: a hypothesis. *Cell Calcium* 15: 431-437, 1994
5. G. Szabadkai, A. Horváth, **T. Rohács**, L. Vimpláti, A. Spät and P. Enyedi: Expression of inositol 1,4,5-trisphosphate receptors in rat adrenocortical zones *Journal of Steroid Biochemistry and Molecular Biology* 57(1-2): 13-17, 1996
6. **T. Rohács**, G. Nagy and A. Spät: Cytoplasmic Ca^{2+} signal and reduction of mitochondrial pyridine nucleotides in adrenal glomerulosa cells *Biochemical Journal* 322: 785-92, 1997
7. **T. Rohács**, K. Tory, A. Dobos, and A. Spät: Intracellular calcium release is more efficient than calcium influx in stimulating mitochondrial NAD(P)H formation in adrenal glomerulosa cells *Biochemical Journal.* 328: 525-28 1997
8. **T. Rohács**, J. Chen, G.D. Prestwich and D.E. Logothetis: Distinct specificities of inwardly rectifying K^+ channels for phosphoinositides *Journal of Biological Chemistry* 274, 36065-72, 1999
9. A. Spät, J. Pitter, **T. Rohács** and G. Szabadkai: Stimulus-secretion coupling and mitochondrial metabolism in steroid-secreting cells. *News Physiol Sci.* 16:197-200, 2001
10. **T. Rohács**, C.M.B. Lopes, T. Mirshahi, T. Jin, H. Zhang and D. E. Logothetis: Assaying PIP_2 regulation of potassium channels. *Methods in Enzymology* 345:71-92, 2002
11. C.M.B. Lopes, H. Zhang, **T. Rohács**, T. Jin, J. Yang and D. E. Logothetis: Alterations in Conserved Kir Channel- PIP_2 Interactions Underlie Channelopathies *Neuron* 34, 933-944, 2002
12. T. Jin, L. Peng, **T. Rohács**, T. Mirshahi, K.W. Chan, R. Sanchez and D.E. Logothetis: The $\beta\gamma$ subunits of G proteins gate a K^+ channel by pivoted bending of a transmembrane segment. *Molecular Cell* 10:469-81, 2002
13. **T. Rohács**, C.M.B. Lopes, T. Jin, P. Ramdya, Z. Molnár and D.E. Logothetis: Phosphoinositide specificity determines lipid regulation of Kir channel activity *Proc. Natl. Acad. Sci. USA* 100:745-50, 2003
14. H. Zhang, L.C. Craciun, T. Mirshahi, **T. Rohács**, C.M.B. Lopes, D.E. Logothetis: PIP_2 activates KCNQ channels and its hydrolysis underlies receptor mediated inhibition of M-current *Neuron* 37:963-75, 2003
15. M.B. Meyers, A. Fischer, Y.J. Sun, C.M.B. Lopes, **T. Rohács**, T. Y. Nakamura, Y.Y. Zhou, P.C. Lee, R.A. Altschuld, S.A. McCune, W.A. Coetzee, G.I. Fishman: Sorcin regulates excitation-contraction coupling in the heart *Journal of Biological Chemistry* 278: 28865-28871, 2003
16. X. Du, H. Zhang, C.M.B. Lopes, T. Mirshahi, **T. Rohács**, D.E. Logothetis: Characteristic interactions with PIP_2 determine regulation of Kir channels by diverse modulators. *J. Biol. Chem.* 279:37271-81, 2004
17. C.M.B. Lopes, **T. Rohács**, G. Czirjak, T. Balla, P. Enyedi, D.E. Logothetis: PIP_2 hydrolysis underlies agonist-induced inhibition and regulates voltage gating of two-pore domain K^+ channels. *J. Physiol.* 564:117-29, 2005 (contributed equally)
18. **T. Rohács**, C.M.B. Lopes, I. Michailidis, D.E. Logothetis: $\text{PI}(4,5)\text{P}_2$ regulates the activation and desensitization of TRPM8 channels through the TRP domain, *Nature Neuroscience* 8:626-634, 2005 (corresponding author)

19. P. Varnai, B. Thyagarajan, **T. Rohacs** and T. Balla: Rapidly inducible changes in phosphatidylinositol 4,5-bisphosphate levels influence multiple regulatory functions of the lipid in intact cells. *J Cell Biol* 175: 377-382, 2006.
20. Viktor Lukacs, Baskaran Thyagarajan, Peter Varnai, Andras Balla, Tamas Balla, **Tibor Rohacs**: Dual regulation of TRPV1 by phosphoinositides *J Neurosci* 27 (26):7070-80.
21. Lopes CMB, Remon JI, Matavel A, Sui JL, Keselman I, Medei E, Shen Y, Rosenhouse-Dantsker A, **Rohacs T** and Logothetis DE. Protein Kinase A Modulates PLC-Dependent Regulation and PIP₂ sensitivity of K⁺ channels. *Channels* 1: 124-134, 2007.
22. **T. Rohacs**: PIP₂ regulation of TRP channels *Pflugers Archive* 453(6):753-62, 2007
23. **T. Rohacs**, Bernd Nilius: Regulation of Transient Receptor Potential (TRP) channels by phosphoinositides *Pflugers Archive* 455(1):157-68, 2007
24. Thyagarajan B, Lukacs V and **Rohacs T**. Hydrolysis of phosphatidylinositol 4,5-bisphosphate mediates calcium induced inactivation of TRPV6 channels. *J Biol Chem* 283: 14980-14987, 2008.
25. **T.Rohacs**, Thyagarajan, B., and Lukacs, V. Phospholipase C mediated modulation of TRPV1 channels. *Mol.Neurobiol.* 2008. 37(2-3):153-63
26. Thyagarajan B, Benn BS, Christakos S, **Rohacs T**. Phospholipase C mediated regulation of TRPV6 channels: implications in active intestinal Ca²⁺ transport. *Mol.Pharmacol.* 2009. 75(3):608-16
27. Eleonora Zakharian, Baskaran Thyagarajan, Robert J. French, Evgeny Pavlov, and **Tibor Rohacs**: Inorganic polyphosphate modulates TRPM8 channels, *PLoS ONE*, 2009;4(4):e5404
28. **Tibor Rohacs**: Regulation of non-canonical transient receptor potential channels by phosphoinositides *Cell Calcium* 2009, 45: 554–565
29. Eleonora Zakharian, Chike Cao, **Tibor Rohacs**, Gating of TRPM8 channels activated by cold and chemical agonists in planar lipid bilayers, *J. Neurosci* 2010, 30(37):12526-34
30. Zakharian, E., Cao, C. **Rohacs, T**. Intracellular ATP supports TRPV6 activity via lipid kinases and the generation of PtdIns(4,5)P₂, *FASEB J*, 2011 25:3915-28.
31. Yudin, Y., Lukacs V., Cao C., **Rohacs, T**. Hydrolysis of phosphatidylinositol 4,5-bisphosphate mediates desensitization of the cold sensor TRPM8 channels, *Journal of Physiology*, 2011, 589:6007-27.
32. Yudin, Y. **Rohacs, T**. Regulation of TRPM8 channel activity, *Molecular and Cellular Endocrinology*, 2012, 353(1-2):68-74
33. Gamper N, **Rohacs T**. Phosphoinositide sensitivity of ion channels, a functional perspective. *Subcell Biochem.* 2012; 59:289-333
34. Cao C, Zakharian E, Borbiri I, **Rohacs T**. Interplay between calmodulin and phosphatidylinositol 4,5-bisphosphate in Ca²⁺-induced inactivation of transient receptor potential vanilloid 6 channels. *J Biol Chem.* 2013; 288(8):5278-90.
35. Lukacs V, Yudin Y, Hammond GR, Sharma E, Fukami K, **Rohacs T.**; Distinctive Changes in Plasma Membrane Phosphoinositides Underlie Differential Regulation of TRPV1 in Nociceptive Neurons. *J Neurosci.* 2013 33(28):11451-63

36. Cao C, Yudin Y, Bikard Y, Chen W, Liu T, Li H, Jendrossek D, Cohen A, Pavlov E, **Rohacs T**, Zakharian E. Polyester Modification of the Mammalian TRPM8 Channel Protein: Implications for Structure and Function. *Cell Reports*. 2013 4(2):302-15
37. Lukacs, V., Rives, J.M., Sun, X., Zakharian, E., **Rohacs, T.** Promiscuous activation of transient receptor potential vanilloid 1 channels by negatively charged intracellular lipids: the key role of endogenous phosphoinositides in maintaining channel activity, *J. Biol. Chem.* 2013 288(49):35003-13
38. **Rohacs, T.**, Phosphoinositide regulation of TRP channels, *Handbook of Experimental Pharmacology*, 2014, 223:1143-76
39. Borbiri, I., Badheka, D., **Rohacs, T.**: Activation of TRPV1 inhibits piezo channels via phosphoinositide depletion, *Science Signaling*, 2015, 8(363):ra15.
40. Badheka D, Borbiri I, **Rohacs T.** Transient receptor potential melastatin 3 is a phosphoinositide-dependent ion channel. *J Gen Physiol*. 2015 146(1):65-77.
41. Elokely K, Velisetty P, Delemotte L, Palovcak E, Klein ML, **Rohacs T**, Carnevale V. Understanding TRPV1 activation by ligands: Insights from the binding modes of capsaicin and resiniferatoxin. *Proc Natl Acad Sci U S A*. 2016, 113(2):E137-45.
42. Yudin Y, Lutz B, Tao YX, **Rohacs T.** Phospholipase C δ 4 regulates cold sensitivity in mice. *J Physiol*. 2016, 594(13):3609-28
43. Velisetty P, Borbiri I, Kasimova MA, Liu L, Badheka D, Carnevale V, Rohacs T. A molecular determinant of phosphoinositide affinity in mammalian TRPV channels. *Sci Rep*. 2016, 6:27652
44. Beckerman, P., Bi-Karchin, J., Park, A. S., Qiu, C., Dummer, P. D., Soomro, I., Boustany-Kari, C. M., Pullen, S. S., Miner, J. H., Hu, C. A., **Rohacs, T.**, Inoue, K., Ishibe, S., Saleem, M. A., Palmer, M. B., Cuervo, A. M., Kopp, J. B. & Susztak, K. Transgenic expression of human APOL1 risk variants in podocytes induces kidney disease in mice. *Nat Med* 23, 429-438, (2017).
45. Badheka, D., Yudin, Y., Borbiri, I., Hartle, C. M., Yazici, A., Mirshahi, T. & **Rohacs, T.** Inhibition of Transient Receptor Potential Melastatin 3 ion channel by G-protein betagamma subunits. *eLife* - in press, (2017).

B. Books, Monographs and Chapters

1. Mechanism of hormone action, in *Nephrologia*, Editors: Laszlo Rosivall, Istvan Kiss, Medintel Press, Budapest, 2003
2. Complex regulation of TRP channels by PIP₂, in *TRP channels in health and disease: implications for diagnosis and therapy*. Editor: Arpad Szallasi, Nova Publishers, 2011

C. Patents Held

1. *Title, U.S. Patent Number, Date of Issue, Inventors*

D. Other Articles (Reviews, Editorials, etc.) In Journals; Chapters; Books; other Professional Communications

1. **T. Rohács:** Teaching Resource. TRP channels *Science STKE* 2005(282):tr14, 2005
2. **Rohacs, T.** Cool channel subunits reveal their independent interactions with menthol, invited perspective, *Journal of Physiology*, 2011, 589:4809

3. **Rohacs T.**, Signal termination: how many different ways can you hit the brakes in biological systems *Acta Physiol (Oxf)*. 2012, 204(4):465, commentary
4. **Rohacs, T.** Sphingosine and the Transient Receptor Potential Kinase(s) *Br. J Pharmacol*, commentary, 2013; 168(6):1291-3
5. **Rohacs, T.** Recording macroscopic currents in large patches from *Xenopus* oocytes, *Methods and Protocols*, 2013; 998:119-31
6. **Rohacs T.**, Regulation of transient receptor potential channels by the phospholipase C pathway. *Adv Biol Regul*. 2013 53(3):341-55
7. **Rohacs T.** Phosphoinositide regulation of TRP channels. *Handb Exp Pharmacol*. 2014;223:1143-76.
8. **Rohacs T.** Phosphoinositide regulation of TRPV1 revisited. *Pflugers Arch*. 2015 467(9):1851-69
9. Badheka D, **Rohacs T**: TRPM3 joins the ranks of PI(4,5)P2 sensitive ion channels. *Channels (Austin)*. 2015;9(5):233-4.
10. **Rohacs T.** Phosphoinositide signaling in somatosensory neurons. *Adv Biol Regul*. 2016 May;61:2-16
11. Carnevale, V. & **Rohacs, T.** TRPV1: A Target for Rational Drug Design. *Pharmaceuticals (Basel)* 9, (2016).
12. Borbiro, I. & **Rohacs, T.** Regulation of Piezo Channels by Cellular Signaling Pathways. *Curr Top Membr* 79, 245-261, (2017).

PRESENTATIONS:

A. Scientific (*Basic Science*): Only invited presentations are listed

- 2002: Department of Physiology, Semmelweis University Medical School, Budapest, Hungary
- 2003: Department of Physiology, UMDNJ – RWJMS, Piscataway, NJ
- 2004: Department of Physiology, SUNY at Stony Brook, Stony Brook, NY
- 2004: Department of Pharmacology and Physiology, UMDNJ – NJMS, Newark, NJ
- 2004: Rammelkamp Center, Case Western, Cleveland OH
- 2007: Department of Biochemistry, UMDNJ – NJMS, Newark NJ
- 2009: Department of Pharmacology, Indiana University, Indianapolis, IN
- 2009: Department of Physiology, UT Southwestern Medical School, Dallas, TX
- 2009: Department of Physiology, Semmelweis University Medical School, Budapest, Hungary
- 2010: Mayo Clinic, Jacksonville, Florida,
- 2010: University of Southern California, School of Pharmacy, Los Angeles, CA
- 2010: Semmelweis Symposium, Semmelweis University Medical School, Budapest, Hungary
- 2010: Weis Center for Research, Geisinger Clinic, Danville, PA
- 2011: Department of Surgery, UMDNJ-NJMS, Newark, NJ
- 2011: Department of Pharmacology and Physiology, Drexel University, College of Medicine
- 2011: Department of Physiology, Thomas Jefferson University, Philadelphia, PA
- 2012: Biophysical Society Meeting, Symposium Chair: Temperature regulation of channels, San Diego, CA
- 2012: Experimental Biology, Symposium on Regulation of TRP channels, San Diego, CA
- 2012: Calcium Signals, Molecular Mechanisms and Integrative Functions, Homburg, Germany
- 2013: International Symposium on PI-PLC activity and Signaling, Ulsan, Korea
- 2013: Okazaki Institute for Integrative Bioscience, Okazaki, Aichi, Japan
- 2013: University of Wyoming, School of Pharmacy, Laramie, WY

2013: Oklahoma Center for Neuroscience, University of Oklahoma, Oklahoma City
2014: Department of Anesthesiology, Rutgers NJMS
2014: Department of Pharmacology, Northwestern University, Chicago, IL
2015: Institute for Computational Molecular Science, Temple University, Philadelphia
2015: Symposium on Phospholipid-related signalling in physiology and pathology, Ulsan, Korea
2016: Ion Channel Gordon Conference, Mount Holyoke College, MA
2017: Department of Physiology, Cornell Medical School
2017: Department of Cellular and Molecular Physiology, Penn State Medical School

B. Professional *n/a*: