CURRICULUM VITAE

Pal Pacher M.D., Ph.D., F.A.P.S., F.A.H.A., F.A.C.C

Work Address: NIH/NIAAA/DICBR Laboratory of Cardiovascular Physiology and Tissue Injury,
5625 Fishers Lane, Room 2N-17
Bethesda, MD 20892-9413

Phone: (301)443-4830 Fax: (301)443-4830

Emails: pacher@mail.nih.gov ppacher@gmail.com ppacher@lycos.com

Web: https://www.niaaa.nih.gov/about-niaaa/our-staff/pal-pacher-md-phd

Google Schoolar profile: http://scholar.google.com/citations?user=XNRjTvcAAAAJ&hl=en

Researchgatenet: http://www.researchgate.net/profile/Pal_Pacher Highly Cited 2014-2022: http://highlycited.com/

AD Scientific Index 2024: https://www.adscientificindex.com/scientist/pal-pacher/4388725

Education and Certifications:

INSTITUTION AND LOCATION	DEGREE	YEAR	FIELD OF STUDY
Semmelweis University of Medicine, Budapest, Hungary	M.D. (summa cum laude)	1993	Medicine
Hungarian Academy of Sciences, Budapest, Hungary	Ph.D. (summa cum laude)	2001	Cardiovascular Pharmacology

Professional Associations:

2011- American College of Cardiology (2011- Elected Fellow of ACC)
2007- Society for Leukocyte Biology
2006- The International Cannabinoid Research Society
2006- Society for Free Radical Biology and Medicine
2006- Nitric Oxide Society
2004- ASPET
2004- American Physiological Society (2006- elected Fellow of the Cardiovascular Section)
2001- American Heart Association (2006- elected Fellow of the Basic Cardiovascular Science Council)
2000-2006 Institute of Holistic Therapies, U.K.
1999-2002 Biophysical Society
1999- Juvenile Diabetes Association
2000- American Diabetes Association
1998-2001 New York Academy of Sciences
1997- International Society for Heart Research
1996- European Societies of Cardiology and Pharmacology

Honors and Awards:

2022- Included in Stanford University/Elsevier World's top 2% scientists list.
2021/2022 Highly Cited in Cross-Field category, Clarivate Analytics
2021 Intramural Scientific Research Achievement Award NIAAA/NIH
2019 Highly Cited in Pharmacology & Toxicology, Clarivate Analytics
2018-2019 President of International Cannabinoid Research Society; Organizer of 29th ICRS Symposium on Cannabinoids in Bethesda (over 500 participants)
2018 Highly Cited in Pharmacology & Toxicology, Clarivate Analytics
2017 Highly Cited 2017 in Pharmacology & Toxicology Included in:"The World's Most Influential Scientific Minds 2017", Clarivate Analytics
2016 Laboratory of Cardiovascular Physiology and Tissue Injury is the recipient of the NIH, Office of Research Services, Division of Occupational Health and Safety, *Laboratory Safety Award for Excellence*.
2016 Highly Cited 2016 in Pharmacology & Toxicology Included in: "The World's Most Influential Scientific Minds 2016" , Thomson Reuters
2015 Highly Cited 2015 in Pharmacology & Toxicology (based on number of total citations of highly cited papers during past 11 years http://highlycited.com/) Included in: "The World's Most Influential Scientific Minds 2015" , Thomson Reuters
2015 November, Honorary Doctorate (Doctor Honoris Causa) from Medical Faculty of Semmelweis University, Budapest
2014 Highly Cited 2014 in Pharmacology & Toxicology (based on number of highly cited papers during past 10 years http://highlycited.com/)Included in: "The World's Most Influential Scientific Minds 2014" , Thomson Reuters
2012- "Star reviewer " selected by the Editor of AJP Heart Circulatory Physiology (announced FASEB Meeting, 2012)

2012- Award and Plenary Lecture of the *International Cannabinoid Research Society* Board of Directors presented at the 2012 ICRS Annual Symposium in Freiburg, Germany
2012- Elected Honorary Member of the Hungarian Society for Experimental and Clinical Pharmacology
2012 May- Listed in top 50 most cited in the World in Pharmacology and Toxicology field during the past decade based on total citations in the field (Institute of Scientific Information/ISI)
2010- Listed in the top 100 most cited in the World in Pharmacology and Toxicology field during the past decade (ISI)
2010- Listed in top 1% cited in Clinical Medicine, Biology and Biochemistry fields during the past decade (ISI)
2011 June- Elected Fellow of the American College of Cardiology
2011 - "Star reviewer" selected by the Editor of AJP Cell Physiology (announced FASEB Meeting,
2011) 2011 Jan- Adjunct Professor, University of Texas Medical Branch, Department of Anesthesiology
2011- Steering Committee Member of the Cancer Redox Biology Faculty, National Cancer Institute (NCI)
2008 - Sanofi Aventis Award
2007- Thomson ISI, fast breaking paper in the field of pharmacology: **P Pacher,** S Batkai, G Kunos. The endocannabinoid system as an emerging target for pharmacotherapy. ***Pharmacological Reviews* 2006; Sept;** 58(3): 389-462. (Cited over 2650 times (Google scholar), #5 top cited paper in Pharmacology field 2006-2009, Scopus). Hottest paper in Pharmacological Reviews of all times (1078 Altmetrics score).
2007 - ISI: hot paper in Biochemistry; most highly cited in *Physiological Reviews* since 2007: **P Pacher**, JS Beckman, L Liaudet. Nitric oxide and peroxynitrite in health and disease. ***Physiol Reviews* 2007; Jan**;87(1):315-424 (cited over 7600 times (Google scholar); #2 top cited paper in Biology/Biochemistry, Essential Science Indicators, Thomson 2009; Editors' selection for hottest paper in Physiological Reviews 2008, 2009, 2010, 2011); among the top 5 most highly cited papers in *Physiological Reviews* of all times.
2006/2007 - 4 Publication Awards, NIH/NIAAA
2006- Elected Fellow of American Heart Association
2006 - Elected Fellow of American Physiological Society Cardiovascular Section
2004 - Best Poster Award, International Society for Heart Research, Brisbane, Australia
2004- Award of Nitric Oxide Society, Nara, Japan
2004- Award for Research Excellence, National Institutes of Health, Bethesda, USA
2000-2001 Postdoctoral Fellowship Award of Juvenile Diabetes Association
1999- Sigma-Aldrich Research Award
1999- Award of Hungarian Pharmacological Society on Young Researcher Competition
Scientific Research Award of TEVA-Biogal Pharmaceutical Company for the best drug-developmental proposal in the CNS, Budapest, Hungary
1998- Young Investigator Award of International Society for the Study of Hypertension in Pregnancy (ISSHP), Kobe, Japan
1997- Award of Hungarian Pharmacological Society on Young Researcher Competition.
Travel Awards: 1997-1999: Travel Award of ISSHP; Travel Award of Soros Foundation; Travel Award of Hungarian Society of Cardiology; Travel Award of Semmelweis University of Medicine.
Consultancy/scientific advisory board (before NIH): Pfizer, Merck, P&G, Millar Instruments

Scientometrics: over 380 publications
Total citations: over 65,000 (over 20,000 since 2020); Hirsch H index: 133 (Google Scholar); Egghe's G-index: 244.
According to total citations (ISI, past 10 years) ranked in top 50-10 in Pharmacology field in the World and in top 1% in Clinical Medicine, Biology and Biochemistry fields.
Included in the list of Highly Cited Researchers 2014, 2015, 2016, 2017, 2018, 2019, 2021, 2022 in Pharmacology & Toxicology or Multiple fields (http://highlycited.com/) based on the number of highly cited papers and total citations during 2002- 2014/2015/2016. and in: "The World's Most Influential Scientific Minds 2014, 2015, 2016 and 2017-2019", Institute of Scientific Information, Thomson Reuters/Clarity Analytics.

Research interest:

Cardiovascular physiology and pharmacology, alcohol use disorder, aging, diabetes, and diabetic complications, oxidative/nitrosative stress and inflammation, lipid endocannabinoid signaling system. Identification of novel therapeutic targets and diagnostic tools against cardiovascular and other disorders associated with oxidative stress, inflammation, and tissue injury, including those triggered by excessive alcohol consumption. Complex hemodynamic measurements.

Professional Work Experience:

2015- Head, Laboratory of Cardiovascular Physiology and Tissue Injury, NIH/NIAAA
2012- Tenured Senior Investigator, National Institutes of Health/NIAAA
2012- Scientific Advisor (unpaid), Dept. Pharmacology, Semmelweis University, Hungary
2011- Adjunct Professor, University of Texas Medical Branch, Department of Anesthesiology
2005- Section Chief, Oxidative Stress and Tissue Injury, Laboratory of Physiologic Studies, NIAAA/NIH

2003-2004 Senior Research Fellow, Laboratory of Physiologic Studies, NIAAA, NIH, Bethesda, USA
2001-2002 Senior Cardiovascular Pharmacologist (Principal Investigator in 8 NIH grants ($1.86 million), co-investigator in 6 grants ($1.65 million), Inotek Pharmaceuticals, Beverly, USA
1999-2001 Visiting Research Scientist, Dept. of Pathology and Cell Biology, Thomas Jefferson Medical University, Philadelphia, USA
1996-1999 Ph.D. student in First National Institute of Cardiology and Dept. of Pharmacology, Semmelweis Univ of Med., Budapest, Hungary
1995-1999 Assistant Professor of Pharmacology, Dept. of Pharmacology, Semmelweis University of Medicine
1994 Lecturer of Pharmacology, Dept. of Pharmacology, Semmelweis University of Medicine, Budapest, Hungary

Editorial Boards:

Regional Editor (U.S.A.):	2003-2017	Current Vascular Pharmacology
	2007-2013	Cardiovascular & Hematological Agents in Medicinal Chemistry
Associate Editor:	2010-	The Journals of Gerontology, Series A: Biological Sciences
	2016-	Geroscience, The Official Journal of the American Aging Association
Editorial Academy:	2006-	International Journal of Molecular Medicine
Editorial Board:	2007-	Frontiers in Bioscience
	2006-2014	Current Medicinal Chemistry
	2005-2014	Current Drug Targets Cardiovascular & Hematological Disorders
	2010-	Diabetes Review Letters
	2010-2019	World Journal of Gastroenterology
	2010-	Alcohol
	2011-2020	Free Radical Biology and Medicine
	2011-	American Journal of Physiol Heart and Circulatory Physiology
	2012-	American Journal of Physiol Cell Physiology
	2015-	Scientific Reports (Nature)
	2019-	British Journal of Pharmacology

Editor: special issues:

2005-	Current Vascular Pharmacology, Hot Topic Issue: Role of Oxidative-Nitrostative Stress and Poly(ADP-ribose) Polymerase in Cardiovascular Pathophysiology
2008-2009:	Frontiers in Bioscience: Nitric oxide, superoxide and peroxynitrite in cardiovascular diseases (with Prof. Ferid Murad, co-winner of the 1998 Nobel Prize in Physiology/Medicine)

Teaching:

1991-1993 Assistant Lecturer of Pharmacology and Microbiology
Jan 1994- July 1994 Lecturer of Pharmacology, Dept of Pharmacology, Semmelweis University of Medicine, Budapest, Hungary
Aug 1995-Febr 1999 Assistant Professor of Pharmacology, Dept of Pharmacology, Semmelweis University of Medicine

My responsibility was teaching Pharmacology and Toxicology (32 hours/week) for Medical Students, Students of Dentistry and Pharmacy. I also participated in the PhD training program of the Department in cardiovascular physiology and pharmacology.

Students/researchers supervised (with current degree/s and position):

Zoltan Ungvari M.D., Ph.D.	1997-1999	(Tenured Professor, Donald W. Reynolds Chair of Aging Research, Univ. of Oklahoma Health Sciences Center, USA)
Lako-Futo Zoltan M.D.	1996-1998	(Physician, 1st Intern Med Hospital, Budapest, Hungary)
Zsolt Bagi M.D., Ph.D.	1997-1999	(Professor, Univ of Georgia, USA)
Gabor Szalai M.D.	1995-1998	(Cardiologist, Baylor College, Texas, USA)
Katalin Komjati M.D., Ph.D	2000-2002	(Research Scientist, Inotek Pharmaceuticals)
Peter Bai, PhD	2000-2003	(Professor Univ of Debrecen)
Rita Benko Ph.D.	2002-2003	(Assistant Professor, Inst. of Human Physiol, Budapest, Hungary
Anne Vaslin	2002-2003	PhD Student, Lausanne, Switzerland)
Lucas Liaudet M.D.	2001-2002	(Professor, Dept. of Internal Medicine, Lausanne, Switzerland)
Cziraki A M.D, Ph.D.	2001-2003	(Professor, Vice Dept. Head, Heart Institute, Pecs University, Hungary)
Xiao CY M.D.	2002-2003	(Research Scientists, Inotek Pharmaceuticals, Beverly, USA)
Chen M M.D.	2002-2003	(Research Scientists, Inotek Pharmaceuticals, Beverly, USA)
Sharon Zac	2002	(Animal Technician, Inotek Pharmaceuticals, Beverly, USA)
Long-Sheng Lu, M.D.	2003	(Research Fellow, Graduate Institute of Pharmacology, National Taiwan University)

Zsusanna Zsengeller M.D., Ph.D	2002-2003	(Assistant Professor of Medicine, Harvard Medical School, Boston)
Oleg V. Evgenov M.D., Ph.D.	2003-2004	(Anesthesiologist, Harvard Medical School, Boston)
Lucja Flis	2005	Special volunteer, (college student)
Nora Czifra	2006	Special volunteer, (Proposal Specialist at EarthBalance)
Anjum Jafri	2005- 2006	Research technician
Partha Mukhopadhyay Ph.D.	2006-	Research Fellow (Staff Scientist 2009-)
Mohanraj Rajesh Ph.D.	2006-2011	Research Fellow, (Assistant Professor in UAE) (FARE Award winner 2009; since 2009-2011 supported by Sanofi Aventis Fellow Award)
Vivek Patel	2007-2010	Special volunteer/high school summer student, (now college student)
Lauren Becker	2008	Special volunteer/ high school summer student, (now college student)
Rachel Gao	2009-2010	Special volunteer/ summer student, (now Senior Scientist at InDevR, Inc.)
Galin Tanchian	2010-2011	Special volunteer/ high school summer student, (now Pharmacist)
Malek Kechrid	2010-2011	Special volunteer/ summer student, (Fellow at NCI/NIH)
Bela Horvath MD., Ph.D.	2010-2011	Supplemental Research Fellow, supported by Hungarian National Innovation Office (FARE Award winner 2011; among top 21 selected to present at NIH Research Festival by the Chair) (now Pathologist at Cleveland Clinic)
Sandor Batkai MD., Ph.D.	2010-2010	Staff Scientist, (now group leader at Institute of Molecular and Translational Therapeutic Strategies, Hannover, Germany)
Enrique Guerrero-Beltrán	2010	Special volunteer, guest researcher for 3 mo, supported by Universidad Nacional Autónoma de México (Received PhD in part based on the work done at NIH in 2011; now Professor, University of Monterrey)
Zongxian Cao MD., Ph.D.	2011-2014	IRTA Fellows (now Pathologist at Hackensack Pathology Associates, Llc)
Enkui Hao MD	2011-2012	Guest researcher, supported by fellowship from China (Cardiologist)
Wen-Shin Lee MD	2011-2012	Guest researcher, supported by fellowship from Taiwan; (now Interventional Cardiologist in Taiwan)
Eileen Holovac	2011-2014	Special volunteer/high school summer student (Pharmacist, Rockville)
Katalin Erdelyi Ph.D.	2012-2015	Vis. Res. Fellow (Biologist at National Institute of Oncology)
Yuping Wang Ph.D.	2012-2013	Guest Researcher, supported by fellowship from China, now PI, Associate Professor
Lisheng Jiang M.D.	2013-2014	Guest Researcher, supported by fellowship from China, now Cardiologist
Sevil Aliyeva M.D.	2014-2014	Special volunteer (Endocrinologist)
Csaba Matyas M.D.	2015-2016	Guest Researcher (now Radiologist at University of Pecs)
Zoltan Varga M.D., Ph.D.	2015-2019 2019	Vis. Res. Fellow; (Recently: Vice Chair Dept. of Pharmacol., Semmelweis Benedict J. Latteri Award for Excellence in Scientific Publication NIAAA
Mike Nan	2015-2016	Post-Bac IRTA Fellow (Recently: Univ. Of Maryland student)
Balazs Nemeth MD	2016- 2017	Guest Researcher (Heart and Vasc Center Semmelweis Univ. Cardiologist)
Cody Savage	2018-2019	College student (Recently Student in Univ of Alabama)
Suxian Zhao MD	2018-2020	Guest Researcher/Special Volunteer (Recently Pathologist in China)
Janos Paloczi Ph.D.	2015-	Res.Fellow; FARE Award; K99 Award in 2020 (Assistant Prof. at LSU)
Csaba Matyas MD, PhD	2018- 2020	Visiting Research Fellow (Guest Researcher 2015-2016) Benedict J. Latteri Award for Excellence in Scientific Publication NIAAA Daniel W. Hommer Award for Outstanding Fellow, NIAAA/NIH
Eszter Trojnar MD, PhD	2018-	Supplemental guest research; from 2019 Visiting Research Fellow 2021 Daniel W. Hommer Award for Outstanding Fellow, NIAAA/NIH
Arif Muhammad PhD	2022-	Visiting Research Fellow (mentoring award)
Chao Quan PhD	2023-	Visiting Research Fellow
Bruno Paes Leme Ferreira DVM	2022-	Visiting Research Fellow
Estifanos Yohannes Getiye PhD	2022-	Visiting Research Fellow
Burhan Yokus MD	2023-	Special Volunteer and Visiting Research Fellow
Lihong Fu PhD Student	2024-	Special Volunteer

Grant review/study sections, committees, etc.:

National/International:

Philips Morris USA: grant reviewer: 2005-2007
Wolfermann-Nägeli Foundation, Germany: grant reviewer: 2008
Catalan Agency for Health Technology Assessment and Research, Spain: grant reviewer:
2008 Hungarian Research Council: grant reviewer: 2008, 2009
Trinity College Dublin: External reviewer for Senior promotions commitee: 2008, 2009
University of Tromso, Norway: External reviewer/1st opponent for PhD defence 2007 (Dr. Elena Egorina)
University of Calgary in Calgary, Alberta, Canada: External reviewer for PhD defence 2008 (Dr. Ali

Gaskari) Alberta Heritage Foundation, Canada: grant reviewer: 2007, 2008, 2009, 2010
American Diabetes Association: ad hoc reviewer; American Heart Association: ad hoc reviewer, abstract review
The Wellcome Trust: grant reviewer: 2009, 2010; Cancer Research UK: grant reviewer: 2009
Health Research Board, Ireland, grant review: 2011;
French National Research Agency "Blanc SVSE 2":
2010
Juvenile Diabetes Research Foundation International: Targets of ROS in T1D complications study section: 2010
Society for Free Radical Biology and Med: abstract reviewer:2008-2011;2020; 2022, 2023 Young Investigator Award Commitee:2009
Society for Free Radical Biology and Medicine: Discovery Award Commitee: 2011
Member of the Scientific Organizing Committee The International Cannabinoid Research Society Annual Meetings 2008, 2009, 2010, 2016, 2018, 2019, 2020, 2021, 2022, 2023
Society for Free Radical Biology and Medicine: Senior Life Achievement Award Commitee: 2010, 2012, 2013, 2014, 2015, 2016, 2017, 2019, 2020, 2021, 2022, 2023
Program Committee for Society for Free Radical Biology and Medicine's 19th Annual Meeting to be held in San Diego, CA, November 14 - 18, 2012 (SFRBM 2012)
Alzheimer Foundation: grant reviewer: 2011
Medical Research Council, UK: grant reviewer: 2008, 2009, 2010, 2011
Romanian Council for Research and development: grant review: 2012
National Science Center, Poland: grant review: 2012
Swiss National Fund for Scientific Research: grant reviewer: 2007-2011, 2012, 2022, 2024
Israel Science Foundation: grant review: 2012, 2022, 2023
ADA diabetes/diabetic complications study section member 2015-2017
Hungarian Academy of Sciences: grant reviewer "Momentum 2012"
Hungarian Research Council: special consortium executive grant review committee"Nagyosszegu OTKA": 2008, 2009, 2012, 2013, 2014
2015 MRMC-BAA CCC review panel (DOD)

NIH:
Institutional ACUC committee:2005-
2006- Regular FARE judge, NIH:
NIH Research festival: abstract reviewer: 2009, 2010, 2011
National Cancer Institute: SBIR Contract Proposals for NCI's Topic 255 "Development of Anti-cancer Agents' study section: 2009
NIH Intramural Research Program"Earl Stadtman Investigators" search committee Member: Pharmacology/Molecular Targets/Molecular Pharmacology/Cell Signaling: 2009-2010; 2022
NIH Intramural Research Program"Earl Stadtman Investigators" search committee Member: Physiology: 2010-2011;
NIH/NIDDK: PAR-08-181 Seeding Collaborative Interdisciplinary Team Science in Diabetes, Endocrinology and Metabolic Diseases (R24) study section: 2011Oct
Steering Committee of the Cancer Redox Biology Faculty, National Cancer Institute: 2011-
Intramural Loan Repayment Programs (ILRP) Scientific Review Committee: 2014, 2016,
2018, 2019, 2020, 2021, 2022, 2023, 2024
NIH Intramural Research Program"Earl Stadtman Investigators" search committee Member: Pharmacology: 2012, 2013, 2014, 2015 and 2016, 2022
NIH, Panel: Synthetic Psychoactive Drugs and Strategic Approaches to Counteract their Deleterious Effects, Division of Neuroscience, Development and Aging (DNDA) Center for Scientific Review, NIH 2017
NIH DDIR Innovation Award program review 2017
NIH Director's representative on BSC presentation of an NIA Investigator 2019

Reviewer:
Circulation; Circulation Research; The Journal of Clinical Investigation; J Am Coll Cardiol; Hypertension; Arteriosclerosis Thrombosis and Vascular Biology; Cardiovasc Res; J Mol Cell Cardiol; Diabetes; Diabetes Care; Diabetologia; Diabetes/Metabolism Research and Reviews; Am J Pathology; Am J Physiology (AJP) Heart Circulation Physiology; AJP Cell Physiology; AJP Lung Cellular and Molecular Physiology; AJP Endocrinology and Metabolism; AJP Regulatory, Integrative and Comparative Physiology; AJP Gastrointestinal and Liver Physiology; Acta Physiologica Scandinavica; FASEB J; J Physiology London; Journal of Pharmacology and Experimental Therapeutics; British Journal of Pharmacology; Biochemical Pharmacology; Toxicology; Toxicology Letters, Molecular Pharmacology; Current Vascular Pharmacology; J Cardiovascular Pharmacology; Methods and Findings in Experimental and Clinical Pharmacology; Can J Pharmacol Physiol; International Journal of Molecular Medicine; Current Medicinal Chemistry; Current Drug Targets Cardiovascular & Hematological Disorders; Cardiovascular & Hematological Agents in Medicinal Chemistry; Journal of Pharmacology and Toxicology; Critical Care Medicine; Critical Care; Am J Respir Crit Care Med; Shock; Life Sciences; J Neurochemistry; International Journal of Cancer; Oncology Reports; European Journal of Cancer; Brain Research; Kidney International; Transplant International; Free Radicals Biol Med; Expert Opinions on Therapeutic Patents; Recent Patents on Inflammation & Allergy Drug Discovery; Journal of Cardiac Failure; Alcohol; American Journal of Psychiatry; Molecular and Cellular Biology; Cardiovascular Drug Reviews; Experimental Biology

and Medicine; Gastroenterology; Hepatology, J Hepatology, Journal of Clinical Anesthesia; Journal of Neurophysiology; Cardiovascular Drugs and Therapy; Experimental and Clinical Endocrinology&Diabetes; Neurochemistry; J Molec Endocrinology; Antimicrobial Agents and Chemotherapy; Journal of Molecular Medicine; Endocrinology; Immunobiology; Journal of Diabetes and its Complications; Journal of Interventional Cardiac Electrophysiology; FEBS letters; Experimental Gerontol; Mech. Ageing Dev.; Aging Cell; Rejuvenation Research; Gerontology; Nature Medicine; Nature Reviews Endocrinology; Chemical Reviews; Pharmacological Review; Nature Chemical Biology; Nature Reviews Drug Discovery; Nature Communications, Nature Reviews Cardiology, TIPS; PNAS USA; Scientific Report

Grants and Contracts:
Present: NIH/NIAAA Intramural program (since 2003)

Since 2003-: Research is supported by the Intramural Research Program of the NIH;
unpaid consultant in various NIH, AHA, ADA and international grants (can be only unpaid consultant in "outside grants" because of the NIH and/or other agencies' regulations)

2008-2010: Recepient of Sanofi Aventis Fellow Award Grant (to support Dr. Mohanraj Rajesh's training: app. 70,000/year for 2 years)

2010-2011: Fellowship Award from Hungarian Research Council (to support Dr. Bela Horvath's stay at NIH: app. 60,000/year for 2 years)

2011: University founds from Taiwan and China to support 2 cardiologist's research training at NIH/NIAAA for 1 year

2012-2017: 1 U01 AA021122-01 Collaborative Extramural-Intramural Grant: "Cell Death in Alcoholic Heart and Muscle" Extramural PIs: Hajnoczky Gyorgy (contact), Rubin Emanuel; Intramural: Pal Pacher (total $348,750/year for 5 years). No resources are provided for the Intramural PI.

2012-2013 Chinese Research Fellowship for training of:
Dr. Yuping Wang
Dr. Lisheng Jiang

2015-2018: Foundation awards to support training of Postdoctoral Fellows at NIH (from Semmelweis MedicalUniversity and American Hungarian Science Foundation) to:
Drs. Zoltan Varga
Dr. Csaba Matyas
Dr. Balazs Nemeth
Dr. Eszter Trojnar

2016-2021: 1U01AA023552-01A1 Collaborative Extramural-Intramural Grant: Novel CB2 agonists shield brain from HIV infection and alcohol exposure**.** Extramural PI: Yuri Persidsky; Intramural: Pal Pacher (total 1.755 million /5 years). No resources are provided for the Intramural PI.

2017-2022: 1U01AA024733-01A1 Autophagy in Alcoholic Pancreatitis PI. Extramural P.I.: Wen-Xing, Ding; Intramural: P.P

Past (before NIH (2003))

Principal Investigator

No.	Title	Period of Performance	Total Grant
1 R43 GM63274-01A1	Novel xanthine oxidase inhibitor for hemorrhagic shock	8/1/01-8/31/02	$214,161
1 R43 GM64016-01A1	Peroxynitrite decomposition catalyst for hemorrhagic shock	5/1/02-4/30/03	$235,780
1 R43 HL69419-01	PARS inhibitor for cardiac allotransplantation	5/1/02-4/30/03	$197,929
1R43CA95807-01	Poly (ADP-ribose) polymerase and doxorubicin cardiotoxicity	7/1/02-6/30/03	$250,000
1R43GM63274-01A2	Peroxynitrite decomposition catalyst for hemorrhagic shock	2/01/02-1/31/03	$177,375
1R43HL69548-01A1	Peroxynitrite decomposition catalysts for bronchiolitis obliterans	7/1/02-6/30/03	$150,224
1R43HL71381-01	Chronic heart failure: the role of poly (ADP-ribose) polymerase activation	9/2/02-8/30/03	$315,259
1R43HL071381-01A1	Chronic heart failure and PARP inhibition	12/1/02-12/1/03	$315,259
			1,855,987

Co-Investigator

No.	Title	Period of Performance	
1 R43 HL68298-01	PARS inhibitor therapy of smoke inhalation injury	8/1/1-1/31/03*	$270,590
1R43CA86149-01A1	A nitric oxide synthase inhibitor for intestinal polyposis	9/1/01-9/29/03	$850,853
1 R43 HD41288-01	Novel therapy for female sexual dysfunction	9/15/019/13/02*	$229,792
1R03AG21206-01	Reactive nitrogen species and cardiovascular aging	7/1/02-6/30/03	$79,502
1R43HL70342-01	Xanthine oxidase inhibitor for congestive heart failure	7/1/02-12/31/02	$220,870
1R43CA097559-01	Doxorubicin cardiotoxicity:protection by peroxynitrite decomposition catalyst		**1,651,607**

Presentations: (selected)

- 2023 Yale Conference for Alcohol Research & Education (YCARE), Yale University School of Medicine, New Haven, CT: Invited Speaker "Alcohol and cardiovascular function and injury"
- 2023 Alcohol Gordon Conference 2023, Ventura, CA: Speaker "The effect of chronic moderate and heavy alcohol consumption on cardiovascular aging"
- 2023 Cannabinoid Function in CNS Gordon Conference, Spain: Speaker "CB2R detection in the brain gets a second look."
- 2023 Pharma R&D: Plenary Speaker: "Targeting cannabinoid 2 receptors (CB2R) for therapeutic gain: promises and difficulties."
- 2023 7th International Conference on Drug Discovery & Lead Optimization 2023, San Francisco, CA: Keynote Speaker: "Targeting cannabinoid 2 receptors for inflammatory diseases: pitfalls and opportunities.
- 2023 NIAAA Council meeting, Bethesda, MD, Speaker "Understanding the interplay of oxidative stress, inflammation, cell death and lipid signaling in tissue injury and AUD-related pathologies; identification of new therapeutic targets."
- 2023 NHLI/NIH Symposium on "Cannabis and Cannabinoids in Heart, Lung, Blood, and Sleep" speaker "Pharmacology of endocannabinoids, marijuana derived phytocannabinoids (THC and cannabidiol) and other constituents of marijuana (e.g. terpenes,flavonoids, etc), and synthetic cannabinoids with focus on cardiovascular impact: the good, the bad, and the ugly"
- Pharma R&D 2022, Plenary Speaker
- 2022 ICRS 2022, Galway
- 2022 New York Medical College 2022
- 2022 Annual meeting of WHMA, Florida
- 2022 Nov American Heart Association Annual Meeting Chicago
- FOCIS 2020: Laval University Quebeck and Meeting of Canadian Society for Immunology
- 2019 Nov, Invited Speaker, Semmelweis Symposium, Budapest Hungary
- 2019 June29-July 04, President, Scientific Organizer, 29th Annual ICRS Symposium on Cannabinoids Bethesda (over 500 participants)
- 2019 Invited Speaker, Laval University, Quebeck City, Canada
- 2019 Invited Speaker, Skaggs School of Pharmacy and Pharmaceutical Sciences, Univ. of Colorado
- 2019 March, Invited speaker: Alcohol Gordon Conference
- 2018 July; ICRS, Leiden, Session Chair, Organizing Committee and Board of Directors Member
- 2018 May; Keynote speaker on 2nd International Pressure-Volume User Group Meeting, Paris, France
- 2018 April; Invited speaker on Frontiers in CardioVascular Biology 2018, Vienna, Austria
  Chair session: New strategies for cardioprotection to prevent heart failure.
- 2017, June 22-27; program committee of ICRS20017, Montreal; Chair session on "Feeding, metabolism and obesity."
- 2017, June 4-6; invited keynote speaker and session chair at The 2nd International Medical Cannabis Conference June 4-6, 2017 Tel Aviv, Israel
- 2017, June: Invited speaker at Hebrew University Cannabinoid Research Center, Jerusalem, Israel
- 2017, April: invited keynote speaker at 23rd Scientific Conference of the Society on NeuroImmune Pharmacology (SNIP), Philadelphia
- 2016, June; ICRS Annual Symposium in Bukovina, Poland; Speaker/Chair Metabolism
- 2016, June; Invited Speaker, 39th Annual Conference on Shock, Austin, Texas; "The endocannabinoid system in shock".
- 2016, April 2-6; Invited Speaker, ASPET Annual Meeting at Experimental Biology 2016, in San Diego, CA, April 2-6, 2016, Symposium on "Novel Targets for Treatment of Cardiometabolic Diseases" "Interplay of oxidative stress, inflammation and the endocannabinoid system in diabetic cardiomyopathy".
- 2016, March 22-23, Invited seminar Dept of Pharmacology, Toxicology and Therapeutics, KU Medical Center."Modulation of cannabinoid 2 receptors (CB2): successes and difficulties?"
- 2016, January 18, Invited Speaker Temple University, Center for Subtstance Abuse Research at the Department of PathologyTemple University School of Medicine PA." Where are we going with modulation of CB2 receptors: successes and difficulties?"
- 2015, Nov 10-13, Invited Seminars, Semmelweis Medical University, Dept of Pharmacology, Hungarian Institute of Cardiology, Department of Interventional Cardiology, Budapest. (recipient of honorary degree)

- 2015, October, Invited Speaker, 2nd Swiss Endocannabinoid Pharmacology Meeting, University of Bern, Switzerland, Cannabinoid 2 receptors in fibrotic diseases: quo vadis?
- 2015, October, Invited Seminar, Department of Intensive Care Medicine, University Hospital and Faculty of Biology and Medicine, Lausanne, Switzerland
- 2015, May, Invited Seminar, Mitocare Center, Thomas Jefferson, PA
- 2015, March 4-7, Medical Cannabis and Cannabinoids: policy, science and medical practice, Prague; plenary speaker
- 2014, Sept 24-26, 8th International Symposium on Cell/Tissue Injury and Cytoprotection/ organoprotection. Budapest, Hungary, "Role of the endocannabinoid system in cardiovascular injury and inflammation"
- 2014, July 14th, NIDA, Bethesda, "Targeting cannabinoid receptor 2 (CB2) in inflammation and tissue injury for therapeutic gain: successes and difficulties."
- 2014, July 3rd, GW Pharma External Collaborator Advisory Meeting, Chair Neurology and Psychiatry
- 2014, July 2nd, ICRS, Baveno, Italy, "Peripherally restricted selective cannabinoid CB2 receptor agonist LEI-101 prevents cisplatin-induced nephropathy"; "Protective effect of the phytocannabinoid betacaryophyllene in liver ischemia-reperfusion injury."
- 2014, June 23-27, International Conference on the Bioscience of Lipids, University of Aberdeen, Scotland, "Endocannabinoid system in diabetes and diabetic complications"
- 2014, June 21, 37th Annual RSA Scientific Meeting and 17th Congress of ISBRASeattle, "Role of poly(ADP)ribose polymerase in regulation of cell fate, inflammation and metabolism in liver disease"
- 2014, April 24, Department of Pharmacology, Dalhousie University, Halifax, Nova Scotia, Canada,
- 2014, Jan 27, Food and Drug Administration, Bethesda, "Targeting the endocannabinoid system in inflammation and tissue injury for therapeutic gain."
- 2013, SFRBM 2013, San Antonio, "Poly (ADP-ribose) polymerase-1 is a key mediator of liver inflammation and fibrosis."
- 2013, June 22-26, 36th Annual RSA Meeting, Orlando, Florida, "The effect of moderate and heavy alcohol consumption on cardiovascular aging"
- 2013, Dec, LSU, New Orleans,"Modulation of the endocannabinoid system in tissue injury: promises and challenges"
- 2013, 49th EASD Annual Meeting, Barcelona, Spain, "The endocannabinoid system in diabetic complications"
- 2012, Oct 09, Signal transduction and redox physiology NCI/NIH
- 2012, Sept 6-7; The 7th International Symposium on Alcoholic Liver and Pancreatic Diseases and Cirrhosis (ISALPD/C), China
- 2012, July 22-27, Plenary Lecture of International Cannabinoid Research Society (ICRS) Board of Directors at the ICRS Annual Symposium in Freiburg, Germany
- 2012, Sept 19-21, Plenary Honorary Lecture at 50th anniversary meeting of the Hungarian Society for Experimental and Clinical Pharmacology, Budapest, Hungary
- 2012, AHA, Annual Meeting
- 2011, Dec, 50th Anniversary Meeting of Phytochemical Society of North America; Hawaii, Medicinal Plants:" Nonpsychoactive constituents from Cannabis sativa (marijuana):Therapeutic potential in inflammatory disorders and diabetes"
- 2011, June, RSA meeting "Role of poly(ADP-ribose) polymerase (PARP) in liver injury, inflammation and fibrosis"
- 2011, May, 102 AOCS Annual Meeting, Cincinnati, "Opposing Effects of Cannabinoid-1 and 2-receptors on Inflammation and Oxidative Stress: Implications for Tissue Injury."
- 2010, November, Redox Biology in Immunology and Cancer Workshop, National Cancer Institute, Bethesda, Maryland: "The role of the endocannabinoid system in inflammation, oxidative stress, and cell death: implications for tissue protection/injury."
- 2010, October, Joint Research Conference of the Institute for Advanced Studies the Hebrew University and the Israel Science Foundation on: CANNABINOIDS IN BIOLOGY AND MEDICINE, Jerusalem, Israel:

"Role of the CB2 receptors in inflammation and tissue injury: interplay of activated endothelium and inflammatory cells"

- 2010, October, Redox Biology course, National Cancer Institute, Bethesda, Maryland: "Endocannabinoids and plant-derived cannabinoids in inflammation, redox regulation and cell death: implications for tissue protection or injury".
- 2010, September, The 2010 ISBRA World Congress, Paris, France: Symposium Organizer on the Role of ROS/RNS in liver injury; Session Chair: Molecular mechanisms of alcoholic liver disease: Roles of endocytosis, PARP, TGF-β
- 2010, August, Federation of the Societies of Biochemistry and Molecular Biology course on Free Radicals, invited speaker: "Methods for the detection of ROS by flow cytometry and imaging" and "ROS/RNS and diseases: animal models."
- 2010, July, The International Cannabinoid Research Society Annual meeting, Lund, Sweden: Session Chair: Metabolism and feeding behavior" Cannabidiol attenuates cardiac dysfunction, oxidative stress, fibrosis, inflammatory and cell death signaling pathways in diabetic cardiomyopathy "Cannabinoid-1 receptor activation induces reactive oxygen species-dependent and –independent mitogen-activated protein kinase activation and cell death in human coronary artery endothelial cells and cardiomyocytes"
- 2010 June, University of Bonn, Germany, Workshop for the DFG Research Unit 926: The Endocannabinoid System: "From Physiology to Pathophysiology", Session Chair: Inflammation and Aging

  'Interplay of oxidative/nitrosative stress, inflammation, cell death signaling pathways and the endocannabinoid system: Implications for cardiovascular disease."
- 2010 June, University of Hannover, Germany, "Role of cannabinoid-2 receptors in inflammation and tissue injury"
- 2010 May, Budapest, Hungarian Academy of Sciences
- Department of Pathology and Laboratory Medicine, 2010 Temple University School of Medicine "Anti-inflammatory and antioxidant effects of CB_2 activation in endothelial cell biology and end-organ protection"
- LSUHSC, Dept of Pharmacology, 2010 Febr, The interplay of the oxidative/nitrosative stress and the endocannabinoid system in cardiovascular disease and tissue injury
- NIH, Pain Interest Group, 2010 "Interplay of the endocannabinoid system with oxidative-nitrosative stress and inflammation in models of tissue injury'
- American Heart Association, Scientific Sessions, 2009, Nov "Cannabidiol Attenuates Myocardial Dysfunction, Fibrosis, Inflammation, Cell Death and Interrelated Signaling Pathways Associated With Diabetic Cardiomyopathy"
- Experimental Biology Meeting, New Orleans 2009 Apr "Cannabidiol attenuates cisplatin-induced nephrotoxicity by decreasing oxidative/nitrosative stress, inflammation and cell death"
- Dept. of Physiology, Louisiana State University Health Sciences Center 2009 Apr "Role of oxidative/nitrosative stress and poly(ADP)-ribose polymerase in cardiomyopathy and heart failure"
- University of Calgary, Canada 2009 Apr "Role of the endocannabinoid system in cardiovascular disease"
- The Hungarian Scientific Research Fund Meeting 2008, Dec, Executive Grant Committee meeting
- American Heart Association, Scientific Sessions, 2008, Nov, New Orleans "Role of PARP in myocardial hypertrophy". Also, symposium organizer.
- 6th Meeting of the International Chair on Cardiometabolic Risk (ICCR), Canada, 2008 "Cardiovascular effects of cannabinoids"
- Section on Neuroendocrine Immunology & Behavior NIMH/NIH, March 2008 "Interplay of oxidative/nitrosative stress and endocannabinoid system in doxorubicin-induced heart failure".
- American Society of Addiction Medicine (ASAM) meeting on April 13, 2008, in Toronto, Canada, "Role of Endocannabinoid System in Cardiovascular Diseases"
- Experimental Biology Meeting, San Diego, 2008 "Hemodynamic measurements in mice and rats using pressure-volume system."
- 3rd International Mitochondria Minisymposium: mitochondria and their proteomics, Natcher Conference Center (Building 45) ♦ Bethesda, Maryland, January 9–11, 2008 "Oxidative/nitrosative stress in various animal models of heart failure."
- Cardiovascular Research Group, University of Alberta, Edmonton, Alberta, Canada 2008 "Interplay between NO, superoxide and peroxynitrite in heart failure"
- Boston Medical Center, Dept of Cardiology 2008 "Endocannabinoid inhibition and its relevance for heart disease, atherosclerosis and cirrhosis"
- New York Medical College, Dept of Physiol., 2008 "Peroxynitrite is a major mediator of cell death and dysfunction in doxorubicin-induced heart failure and myocardial infarction"

- GW 3rd Annual Scientific Review, Royal Academy of Science, London, 2008." Cannabinoids and the cardiovascular system"
- The George Washington University, Dept of Cardiology, 2007 "Peroxynitrite is the major trigger of doxorubicin-induced cell death in myocytes and endothelial cells in vivo and in vitro"
- American Heart Association Meeting 2007, Orlando "Title: Role of superoxide, nitric oxide and peroxynitrite in doxorubicin-induced cell death in vitro and in vivo"
- 10th International Conference on Bioactive Lipids in Cancer, Inflammation and Related Diseases 2007 "Role of CB2 cannabinoid receptors in endothelial inflammatory response: implications for ischemia-reperfusion injury, atherosclerosis and cardiovascular aging."
- University Tromso, Faculty of Medicine, Norway 2007; first opponent on PhD defense of Elena Egorina
- CB2 cannabinoid receptors: new vistas, Banff, Canada, 2007 "Role of endocannabinoids and cannabinoid 2 receptor in hepatic ischemia/reperfusion injury"
- International Cannabinoid Research Society Meeting, Saint-Sauveur, Canada, 2007 "Cannabinoid receptor 2 mediates protection against hepatic ischemia/reperfusion injury" "Pharmacological inhibition of cannabinoid-1 receptor protects against doxorubicin-induced cardiotoxicity."
- East Coast PARP 2007 Meeting, Quebec, Canada "Role of PARP in heart failure and angiogenesis"
- NIH Research Festival, 2006; Session Chair "Neural and Neuroendocrine Factors in Shock and Inflammatory Tissue Damage" "Endocannabinoid System: Emerging Target against Ischemic-reperfusion Injury"
- 15th World Congress of Pharmacology, Beijing, China, July 2006 "Pharmacological modulation of oxidative-nitrosative stress and downstream effectors in heart failure."
- International Semmelweis Symposium "Nitric oxide and nitrosative stress in the cardiovascular system", Budapest, Hungary, October 2006; Session Chair; "Nitrosative stress, PARP and chronic heart failure"
- HHS Office of Public Health Emergency Preparedness, August 2006 "PARP inhibition against toxin-induced cardiovascular collapse."
- Pennington Biomedical Research Center, Louisiana State University System, 2006 "Diabetic cardiovascular dysfunction: role of PARP"
- Hungarian Academy of Sciences, August 2005 "Role of peroxynitrite in the contractile dysfunction in doxorubicin-induced heart failure"
- Departments of Human Physiology and Clinical Experimental Research and Pharmacology and Pharmacotherapy, Medical Faculty, Semmelweis University Medical School, Budapest, Hungary, 2005. "New pharmacological strategies against doxorubicin-induced cardiotoxicity"
- 1st Annual INIP Biodefense Workshop, NIH, 2004
- Department of Life Sciences,University of Hertfordshire, UK, October 2004 "Mechanisms of heart failure, role of oxidative stress"
- Centre for Cardiovascular Biology & Medicine, GKT School of Biomedical Sciences, King's College London, Guy's Campus, London SE1 1UL., UK, October 2004 "Role of peroxynitrite and PARP in heart failure"
- Department of Physiology, Ludwig Maximilians University, Munich, Germany, October 2004 "PARP in cardiovascular diseases"
- Department of Pharmacology and Pharmacotherapy, Semmelweis University, Budapest, Hungary, 2004 "Diabetic cardiomyopathy: role of PARP"
- XVIII World Congress International Society for Heart Research, Brisbane, Australia, August 2004 "Role of oxidative and nitrosative stress in various forms of heart failure"
- 9th World Congress on Advances in Oncology and 7th International Symposium on Molecular Medicine Crete, (Greece), October 14-16, 2004; Session Chair; "Mechanisms of Doxorubicin-induced cardiotoxicity"
- 3rd International conference on the Biology,Chemistry and Therapeutic Applications of Nitric Oxide, (Japan) May, 2004 "Peroxynitrite neutralization protects against doxorubicin-induced heart failure"
- 5th International Congress on Coronary Artery Disease, Florence (Italy), October 2003 "Pharmacological inhibition of PARP as new therapy for chronic heart failure"
- Procter & Gamble, Cincinnati, (USA), 2003 "Application of pressure-volume system in rodents"
- Experimental Biology Meeting (FASEB), New Orleans, (USA), 2002 "Role of PARP in ARDS"
- Semmelweis University, Budapest, Hungary, 2001
- International Society for the Study of Hypertension in Pregnancy (ISSHP) meeting, Kobe, Japan, 1998 "Prolongation of repolarization in postpartum animals: clinical relevance."

- WPA Thematic Conference "Synthesis Between Psychopharmacology and Psychotherapy", Jerusalem, Israel, November 16-21, 1997 “Cardiovascular effects of fluoxetine”

Collaborators (past/present):

NIH:

Dr. **George Kunos**; Scientific Director, NIAAA/NIH;
Dr. **Resat Cinnar;** NIAAA/NIH.
Dr. **Tony Jourdan**, NIAAA/NIH.
Dr. **Byoung Song;** Unit of Molecular Biology, NIAAA/NIH;
Dr. **Bin Gao**; Chief, Laboratory of Liver Biology, NIAAA/NIH.
Dr. **Ted Usdin**; Laboratory of Genetics, National Institute of Mental Health.
Dr. **Esther M. Sternberg**, Director Integrative Neural Immune Program Section on Neuroendocrine Immunology & Behavior, National Institute of Mental Health.
Dr. **Michael J. Iadarola,** chief of the Neuronal Gene Expression Unit, National Institute of Dental and Craniofacial Research.
Drs. **David Wink** and **Murali Krishna Cherukuri;** National Cancer Institute, Radiology Branch
Dr. **Wen Jin Wu**: FDA/CDER
Dr**. Falk W. Lohoff**, Chief, Section on Clinical Genomics and Experimental Therapeutics (CGET)

Extramural:

United States:
Prof. **Benjamin F. Cravat**, Departments of Cell Biology and Chemistry, The Scripps Research Institute, La Jolla, CA;
Dr. **Daniel Nomura**, University of California at Berkeley.
Prof. **Gabor Kalle**, Dept. of Physiology, New York Medical College, Valhalla, New York 10595,
Prof. **Zoltan Ungvari**, University of Oklahoma Health Sciences Center.
Prof. **Gyorgy Hasko**; Department of Surgery, UMD NJ-New Jersey Medical School, Newark, New Jersey.
Dr**. Oleg V. Evgenov**; Department of Anesthesia & Critical Care Massachusetts General Hospital, Harvard Medical School, Boston, MA 02114.
Prof. **Aron Lichtman**, VCU.
Prof **Ken Mackie**, Department of Psychological and Brain Sciences and Program in Neuroscience;
Professor **David Kass**; Johns Hopkins University, Baltimore.
Drs. **Lois E. Smith** and **Zsuzsanna Zsengeller**; Children's Hospital Boston, Harvard Medical School
Prof. **Aristidis Veves**, Beth Israel Deaconess Medical Center, Boston, MA
Prof. **Balaraman Kalyanaraman**, Medical College of Wisconsin
Dr. **Zsuzsanna Zsengeller, Isaac E. Stillman**, Department of Pathology, Beth Israel Deaconess Medical Center
Prof **Cecilia Hillard,** Medical College of Wisconsin
Dr. **Thomas Shindler**, Johns Hopkins University
Prof. **Csaba Szabo**, Anesthesiology, UTMB; Univ. of Freiburg, Switzerland
Prof. **Yuri Persidsky**, Temple Univ., Dept. of Pathology; Prof. **Wen-Xing Ding**, Univ of. Kansas, Dept. of Pharmacol, Toxicol &Therapeutics

Europe:
Prof. **Lucas Liaudet**, Critical Care Division, Department of Internal Medicine, University Hospital, Lausanne, Switzerland.
Jon Mabley, School of Pharmacy and Biomolecular Sciences, University of Brighton, Brighton UK.
Drs. **Rohini Kuner;** University of Heidelberg, Germany
Drs. **Stefan Engeli** and **Jens Jordan;** Franz Volhard Clinical Research Center, Charité Campus Buch, and HELIOS Klinikum Berlin, Berlin, Germany.
Prof. **Roger Pertwee**, University of Aberdeen, UK
Dr. **Peter Bai,** Univ of Debrecen Hungary
Prof. **Peter Ferdinandy**, Dept. of Pharmacology, Semmelweis University
Prof.**Zoltan Benyo**,Institute of Human Physiology and Clinical Experimental Research, Semmelweis University
Dr. **Peter Hamar**, Semmelweis University, Dept. of Pathophysiology
Semmelweis University, Heart and Vascular Center
Prof. **Mauro Maccarrone**, University of Teramo, Italy.
Prof. **Jürg Gertsch,** University of Bern, Institute of Biochemistry and Molecular Medicine
Drs. **Grether Uwe, Juergen Fingerlee, Christoph Ulmer**, Hoffman-La Roche, Switzerland
Dr. **Mario van der Stelt**, Leiden University, Netherlands
Prof. **Raphael Mechoulam**; Department of Medicinal Chemistry and Natural Products, Hebrew University Medical Faculty

PEER-REVIEWED ORIGINAL RESEARCH PAPERS (selected from over 350)

1996-2000

1. V Kecskeméti, **P PACHER**, P Nánási, C Pankucsi: Comparative study of cardiac electrophysiological effects of atrial natriuretic peptide ***J Mol Cell Biochem*** 1996, 160/161:53-59.
2. **P PACHER**, V Kecskeméti, I Balogh, AZ Rónai, G Szalai, B Matkovics: Changes in cardiac electrophysiology, morphology, tissue biochemistry, and vascular reactions in glutathione depleted animals. ***J Mol Cell Biochem*** 1998;185, 183-190.
3. Z Ungvári, **P PACHER**, V Kecskeméti, L Szollár, A Koller. Increased myogenic tone in skeletal muscle arterioles of diabetic rats. Possible role of increased activity of smooth muscle Ca2+ channels and protein kinase C. ***Cardiovasc Res* 1999**; 43(4), 1018-28.
4. Z Ungvári, **P PACHER**, V Kecskeméti, A Koller. Fluoxetine dilates isolated small cerebral arteries of rats and attenuates constrictions to serotonin, norepinephrine and a voltage dependent Ca^{2+} channel opener. ***Stroke* 1999**; 30(9), 1949-54.
5. Z Ungvári, **P PACHER**, K Rischák, L Szollár, A Koller. Endothelial dysfunction in isolated arterioles of methionine diet-induced hyperhomocysteinemic rats. ***Arterioscler Thromb Vasc Biol* 1999**; 19, 1899-1904.
6. **P PACHER**, Z Ungvári, V Kecskeméti, A Koller. Serotonin reuptake inhibitor, fluoxetine, dilates isolated skeletal muscle arterioles. Possible role of altered Ca^{2+} sensitivity. ***Br J Pharmacol* 1999**; 127, 740-746**.**
7. **P PACHER**, Z Ungvari,V Kecskeméti. Cardiac electrophysiological effects of homocystein in isolated rats right ventricular papillary muscles and left atria. ***Gen Pharmacol*. 1999**; 32, 439-443.
8. **P PACHER**, Z Ungvari, P P Nánási, V Kecskeméti. Electrophysiological changes in rat ventricular and atrial myocardium at different stages of experimental diabetes. ***Acta Physiol Scand*. 1999**; 166, 7-13.
9. **P PACHER**, Z Ungvari, P P Nánási, V Kecskeméti. Electrophysiological changes in rat ventricular and atrial myocardium at different stages of experimental diabetes. ***Acta Physiol Scand*. 1999**; 166, 7-13.
10. E Kocsis, **P PACHER**, I Posa, E Nieszner, G Pogátsa, MZ Koltai. Hyperglycaemia alters the endothelium-dependent relaxation of canine coronary arteries. ***Acta Physiol Scandinavica*. 2000**; 169:183-7.
11. Z Ungvári, **P PACHER**, A Koller. Fluoxetine Decreases Arterioles Myogenic Tone by Reducing Smooth Muscle $[Ca^{2+}]_i$. ***J Cardiovasc Pharmacol* 2000**; 35:849-54.
12. F Deák, B Lasztóczi**, P PACHER**, G Petheö, V Kecskeméti, A Spät. Inhibition of voltage-gated calcium channels by fluoxetine in rat hippocampal pyramidal cells. ***Neuropharmacology.* 2000**, 39:1029-1036.
13. **P PACHER**, J Magyar, P Szigligeti, T Bányász, C Pankucsi, S Korom, Z Ungvári, V Kecskeméti, PP Nánási. Electrophysiological effects of fluoxetne in mammalian cardiac tissues. ***Naunyn- Schmiedeberg's Arch Pharmacol.* 2000**, 361:67-73.
14. **P PACHER**, Z Bagi, ZL Futó, Z Ungvári, PP Nánási, V Kecskeméti. Cardiac electrophysiological effects of citalopram in guinea pig papillary muscle Comparison with clomipramine. ***Gen Pharmacol* 2000**; 34:17-23.
15. **P PACHER**, G Csordás, G Hajnoczky. Quantification of calcium signal transmission from the sarco-endoplasmic reticulum to mitochondria. ***J Physiology (London)* 2000**; 529: 553-564.

2001

16. A Marton, **P PACHER**, KG Murthy, ZH Nemeth, G Hasko, C Szabo. Anti-inflammatory effects of inosine in human monocytes, neutrophils and epithelial cells in vitro. ***Int J Mol Med* 2001**; 8:617-621.
17. **P PACHER**, Z Ungvari, V Kecskemeti, T Friedmann, S Furst. Serotonin reuptake inhibitors fluoxetine and citalopram relax intestinal smooth muscle. ***Can J Physiol Pharmacol* 2001**; 79:580-584.
18. L Liaudet , J Mabley, G Soriano, **P PACHER**, A Marton, G Hasko, C Szabo. Inosine reduces systemic inflammation and improves survival in septic shock induced by cecal ligation and puncture. ***Am J Respir Crit Care Med* 2001**; 164:1213-20.
19. G Soriano, **P PACHER**, J Mabley, L Liaudet, C Szabo. Rapid reversal of diabetic endothelial dysfunction by pharmacological inhibition of poly(ADP-ribose) polymerase. ***Circ Res* 2001**;89(8):684- 91.
20. **P PACHER** & G Hajnoczky. Propagation of the apoptotic signal by mitochondrial waves. ***EMBO J* 2001**;20:4107-4121.

2002

21. J Magyar, T Bányász, Z Bagi, **P PACHER**, N Szentandrássy, L Fülöp, V Kecskeméti and P P. Nánási. Electrophysiological effects of risperidone in mammalian cardiac cells. ***Naunyn-Schmiedeberg's Arch Pharmacol.* 2002**; 366(4):350-6 .
22. FG Soriano, L Liaudet, E Szabo, L Virag, J Mabley, **P PACHER**, C Szabo. Resistance to acute septic peritonitis in poly (ADP-Ribose) polymerase-1 deficiens mice. ***Shock* 2002**;17(4):286-292.
23. C Szabo, JG Mabley,SM Moeller, R Shimanovich**, P PACHER**, L Virag, FG Soriano, JH Van Duzer, W Williams, AL Salzman, JT Groves. Part I: Pathogenetic Role of Peroxynitrite in the Development of Diabetes and Diabetic Vascular Complications: Studies With FP15, A Novel Potent Peroxynitrite Decomposition Catalyst. ***Mol Med* 2002** Oct;8(10):571-80.

24. JG Mabley, L Liaudet, **P PACHER**, GJ Southan, AL Salzman, C Szabo. Part II: Beneficial Effects of the Peroxynitrite Decomposition Catalyst FP15 in Murine Models of Arthritis and Colitis. ***Mol Med* 2002** Oct;8(10):581-90.
25. A Csiszar, G Steff**, P PACHER**, Z Ungvari. Oxidative stress-induced isoprostane formation may contribute to aspirin resistance in platelets. ***Prostaglandins Leukot Essent Fatty Acids* 2002**;66(5- 6):557-8.
26. G Haskó, JG Mabley, ZH Németh, **P PACHER**, EA Deitch, C Szabó. Poly(ADP-ribose) polymerase is a regulator of chemokine production: relevance for the pathogenesis of shock and inflammation. ***Mol Med* 2002,** 8(9)285-292.
27. L Liaudet, K Murthy, J Mabley, **P PACHER**, FG Soriano, A.L Salzman, C Szabo. Comparison of Inflammation, Organ Damage, and Oxidant Stress Induced by *Salmonella enterica* Serovar Muenchen Flagellin and Serovar Enteritidis Lipopolysaccharide. ***Infect Immun* 2002**; 70:192-198.
28. ZH Németh, EA Deitch, C Szabó, JG Mabley, **P PACHER**, Z Fekete, CJ Hauser, and G Haskó**.** Na+/H+ exchanger blockade inhibits enterocyte inflammatory response and protects against colitis. ***Am J Physiol Gastrointest Liver Physiol* 2002** 283 (1): p. G122-132.
29. J Mabley, **P PACHER**, AL Salzman, C Szabo. Nicotine reduces the incidence of type I diabetes in mice. ***J Pharm Exp Ther* 2002**, 300(3):876-881.
30. L Liaudet, J Mabley, **P PACHER**, L Virag, FG Soriano, A. Marton, G Hasko, EA Deitch, C Szabo. Inosine exerts a broad range of anti-inflammatory effects in a murine model of acute lung injury. ***Ann Surgery* 2002**; 235:568-578.
31. L Liaudet, **P PACHER**, J Mabley, L Virag, FG Soriano, C Szabo. Activation of poly(ADP-ribose) polymerase-1 is a central mechanism of LPS-induced acute lung inflammation. ***Am J Resp Crit Care Med* 2002**, 165:372-377.
32. MY Kirov, OV Evgenov, VN Kuklin, L Virag, **P PACHER**, GJ Southan, AL Salzman, C Szabo, LJ Bjertnaes. Aerosolized linear polyethylenimine-NONO attenuates endotoxin-induced lung injury in sheep. In press in**: *Am J Resp Crit Care Med* 2002**; 166(11):1436-42.
33. G Szabó, S Bährle, N Stumpf, K Sonnenberg, É Szabó, **P PACHER**, T Csont, R Schulz, TJ Dengler, L Liaudet, GJ Southan, CF Vahl, S Hagl and C Szabó. Poly (ADP-ribose) Polymerase Inhibition Reduces Reperfusion Injury after Heart Transplantation. ***Circ Res* 2002**; 11;90(1):100-6.
34. C Szabó, A Zanchi, K Komjáti, **P PACHER**, AS Krolewski, WC Quist, ES Horton, FW LoGerfo, A Veves. Poly (ADP-ribose) polymerase is activated in subjects at risk of developing type 2 diabetes and is associated with impaired vascular reactivity. ***Circulation* 2002**;106:2680-2686.
35. **P PACHER**, JG Mabley, FG Soriano, L Liaudet, C Szabó. Poly(ADP-ribose) polymerase activation contributes to the endothelial dysfunction associated with hypertension and aging. ***Int J Mol Med* 2002** Jun;9(6):659-664.
36. **P PACHER**, A Cziráki, L Papp, JG. Mabley, C Szabó. Role of poly(ADP-ribose) polymerase activation in the endotoxin-induced cardiac collapse in rodents. ***Biochem Pharmacol***. *2002*;64(12):1785-91. (**IF: 4.89**)
37. **P PACHER**, JG Mabley, FG Soriano, L Liaudet, K Komjati, C Szabó. Endothelial dysfunction in aging animals: the role of poly(ADP-ribose) polymerase activation. ***Br J Pharmacol* 2002**, 135(6)1347-50.
38. **P PACHER**, L Liaudet, P Bai, L Virag, JG Mabley, G Haskó and C Szabó. Activation of poly(ADP-ribose) polymerase contributes to the development of doxorubicin-induced heart failure. ***J Pharm Exp Ther* 2002**, 300(3):862-867.
39. **P PACHER**, L Liaudet, JG Mabley, C Szabó. Pharmacological inhibition of poly(ADP-ribose) polymerase may represent a novel therapeutic approach in chronic heart failure. ***J Am Coll Cardiol* 2002**, 40/5 pp. 1006-1016.
40. **P PACHER**, L Liaudet, FG Soriano, JG Mabley, E Szabó and C Szabó. The role of poly(ADP-ribose) polymerase in the development of cardiovascular dysfunction in diabetes mellitus. ***Diabetes* 2002**, 51:514-521.
41. **P PACHER**, AP Thomas, G Hajnoczky. Ca^{2+} Marks: Miniature calcium signals in single mitochondria driven by ryanodine receptors. ***PNAS USA***, **2002**, 99: 2380-2385.

2003

42. J Liu, S Batkai, **P PACHER**, J Harvey-White, JA Wagner, BF Cravatt, B Gao, G Kunos. Lipopolysaccharide induces anandamide synthesis in macrophages via CD14/MAPK/ phosphoinositide 3-kinase/NF-kappaB independently of platelet-activating factor**. *J Biol Chem*. 2003** 7;278(45):45034-9.
43. M Begg, FM Mo, L Offertaler, S Batkai**, P PACHER**, RK Razdan, DM Lovinger, G Kunos. G protein-coupled endothelial receptor for atypical cannabinoid ligands modulates a Ca2+-dependent K+ current. ***J Biol Chem.* 2003** Nov 14;278(46):46188-94.
44. AG Minchenko, MJ Stevens, L White, OI Abatan , K Komjati**, P PACHER**, C Szabo, IG Obrosova. Diabetes-induced overexpression of endothelin-1 and endothelin receptors in the rat renal cortex is mediated via poly(ADP-ribose) polymerase activation. ***FASEB J***. **2003** Aug;17(11):1514-6.
45. JG Mabley , A Rabinovitch, W Suarez-Pinzon, G Hasko, **P PACHER**, R Power, G Southan, A Salzman A, C Szabo. Inosine protects against the development of diabetes in multiple-low-dose streptozotocin and nonobese diabetic mouse models of type 1 diabetes. ***Mol Med.* 2003** Mar-Apr;9(3-4):96-104.
46. L Liaudet, C Szabo, K Murthy, O Evgenov, **P PACHER**, L Virag, J Mabley, Marton A, FG Soriano, Kirov

MY, Bjertnaes LJ, AL Salzman. Flagellin from gram-negative bacteria is a potent mediator of acute lung inflammation. ***Shock*** **2003** Feb;19(2):131-7.

47. JG Mabley, **P PACHER**, L Liaudet, FG Soriano, G Haskó, A Marton, C Szabó and A Salzman. Inosine reduces inflammation and improve survival in a murine model of colitis. ***Am J Physiol-Gastrointestinal*** **2003** Jan;284(1):G138-44.
48. E Bakondi , M Gonczi , E Szabo, P Bai , **P PACHER**, P Gergely, L Kovacs, J Hunyadi , C Szabo, L Csernoch , L Virag . Role of intracellular calcium mobilization and cell-density-dependent signaling in oxidative-stress-induced cytotoxicity in HaCaT keratinocytes. ***J Invest Dermatol.*** **2003** Jul;121(1):88-95.
49. J Magyar, Z Rusznák, C Harasztosi, Á Körtvély, **P PACHER**, T Bányász, L Kovács, G Szûcs, PP Nánási and V Kecskeméti. Differential effects of R(-) and S(+) enantiomers of fluoxetine in mammalian neural and cardiac tissues. ***Int J Mol Med*** **2003** Apr;11(4):535-42.
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INTERVIEWS

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