

## *Péter Nagy*

### *Curriculum Vitae as of May 10, 2019*

#### **Contact**

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#### **Positions Held**

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2017- Scientific Director at the National Institute of Oncology, Hungary  
2013- Director of International Relations at the National Institute of Oncology, Hungary  
2011- Head of the Department of Molecular Immunology and Toxicology at the National Institute of Oncology, Hungary  
2019- Honorary Professor at Debrecen University, Hungary  
2018- Visiting Professor at Semmelweis University, Hungary  
2015- Honorary Associate Professor at Debrecen University, Hungary  
2015- Honorary Senior Research Fellow at the University of Otago, Christchurch, Department of Pathology, Free Radical Research Group, New Zealand  
2011-2014 Honorary Research Fellow at the University of Otago, Christchurch, Department of Pathology, Free Radical Research Group, New Zealand  
2012- 2013 Deputy Director of International Relations at the National Institute of Oncology, Hungary  
2010- 2011 Research Fellow at the University of Otago, Christchurch, Department of Pathology, Free Radical Research Group, New Zealand  
2010 Invited Visiting Research Fellow at the University of Washington, Department of Medicine Division of Metabolism, Endocrinology and Nutrition, Seattle, USA  
2008 - 2009 Visiting Research Fellow at the Swiss Federal Institute of Technology (ETH), Department of Chemistry, Zurich, Switzerland  
2007 - 2009 Postdoctoral Fellow at the University of Otago, Christchurch, Department of Pathology, Free Radical Research Group, New Zealand  
2004 - 2007 Postdoctoral Fellow at the University of Oklahoma, Department of Chemistry and Biochemistry, USA

#### **Academic Achievements**

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2017 Doctor of Science of the Hungarian Academy of Sciences  
2012 Habilitation at Debrecen University  
2004 June Ph.D. graduation at The Royal Institute of Technology (KTH), Stockholm, Sweden  
2004 April Ph.D. graduation at Debrecen University (DU), Debrecen, Hungary  
2003 Certificate in Environmental Monitoring (TUV Akademie, Germany)  
2000 Master of Science in Chemistry, Debrecen University

## Roles in International Organizations

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- 2019- Hungarian delegate in the Scientific Council of WHO's International Agency for Research on Cancer (IARC)
- 2016- Accreditation and Designation Board member of the Organization of European Cancer Institutes (OECI)
- 2019- EURACAN Steering Committee member
- 2018- WP5 workpackage Leader in the 'Innovative Partnership for Action Against Cancer — iPAAC'
- 2017- WP T3 Leader in the 'Using guidelines and benchmarking to Trigger social entrepreneurship solutions towards better patient-centred cancer care in central Europe — INTENT' project
- 2017- Institutional coordinator in the 'CHRODIS-PLUS: Implementing good practices for chronic diseases — CHRODIS-PLUS' project
- 2016- Institutional coordinator in the Joint Actions on Rare Cancers
- 2016- Institutional contact person in the European Reference Network Scheme for Rare Diseases.
- 2015- Accreditation Auditor for OECI
- 2013-2016 WP5 Leader (Benchmark tools piloting) in the BenchCan project (Benchmarking Comprehensive Cancer Care and Cancer Care Pathways in Europe)
- 2012-2016 Coordinator in the EurocanPlatform project (Structuring Translational Cancer Research in Europe)
- 2012- Participant and coordinator in the Transcan project (ERA-NET research grant mechanism for translational cancer research)

## Honors

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### Member in Editorial Boards

- 2019- *Member of the Editorial Board:* Journal of Biological Chemistry
- 2016- *Review Editor:* British Journal of Pharmacology
- 2017- *Editor:* Onkológia & Hematológia
- 2011- *Member of the Associate Editorial Board:* International Journal of Biochemistry and Molecular Biology

### Current Grant Supports

- 2019- National Excellence Program  
Consortial Research Program entitled "Innovations in Breast Cancer Care"  
Role: Principal Investigator
- 2019-2020 JSPS International Fellowships for Research in Japan  
To invite overseas researchers with excellent records for research achievements to collaborate with Japanese colleagues in carrying out research through long-term visits
- 2018-2022 National Research, Development and Innovation Fund  
Researcher Initiated Research Project Grant  
Role: Principal Investigator
- 2017-2019 National Research, Development and Innovation Fund  
Grant for Research Teams with Significant Achievements of Internationally Outstanding Impact  
Role: Principal Investigator
- 2016-2018 NIH R21  
Role: Co- Investigator
- 2013-2017 Hungarian National Science Foundation  
Researcher Initiated Research Project Grant  
Role: Principal Investigator

- 2018- 2021 'Innovative Partnership for Action Against Cancer — iPAAC'  
Role: Institutional coordinator
- 2017-2022 ERN EURACAN  
Role: Steering Committee member
- 2017-2020 'CHRODIS-PLUS: Implementing good practices for chronic diseases — *CHRODIS-PLUS*'  
Role: Institutional coordinator
- 2017- 2020 'Using guidelines and benchmarking to Trigger social entrepreneurship solutions towards better patient-centred cancer care in central Europe — INTENT' project  
Role: Institutional coordinator
- 2016-2019 Joint Actions on Rare Cancers — JARC  
Role: Institutional coordinator

### **Important Invited or Contributed Lectures**

- 2018 Speciation of reactive sulfur species: Do we have any clue about what's inside the cell?  
*Invited Speaker at the 4th meeting of the study group for redox biology of the German Society for Molecular Biology and Biochemistry, Berlin, Germany*
- 2018 Speciation of reactive sulfur species: do we have any clue about what's inside the cell?  
*Invited speaker at the Thiol-Based Redox Regulation and Signaling (Gordon Research Conference), Spain*
- 2018 Reactive sulfur species: mechanistic considerations for their regulatory functions in redox biology  
*Invited Speaker and session chair/organizer of the Redox Biology section at the 2018 FEBS conference, Prague, Czech Republic*
- 2018 Dynamic redox cycling of hydrogen sulfide and polysulfide species could represent an important regulatory element in sulfur biology  
*Invited Speaker and session chair/organizer at the 2018 SFRRI, Lisboa, Portugal*
- 2018 Speciation of reactive sulfur species: do we have any clue about what's inside the cell?  
*Invited Speaker and member of the scientific advisory board at the 5th World Congress on Hydrogen Sulfide in Biology and Medicine, Toronto, Canada*
- 2017 Dynamic redox cycling of hydrogen sulfide and polysulfide species could represent an important regulatory element in sulfur biology  
*Invited Speaker organizer of the Plant and Human Sulfur Biology Conference 2017, Balatonfüred, Hungary*
- 2017 Roles of the thioredoxin and glutathione systems in reduction of inorganic- and Cys-polysulfide spec  
*Invited Speaker at the SE2017: The 11th International Symposium on Selenium in Biology and Medicine and The 5th International Conference on Selenium in the environment and Human health, Stockholm, Sweden*
- 2017 Hydrogen Sulfide Signaling  
*Invited Lecture at the Redox regulation, oxidative stress and selenoproteins - Summer Graduate Course, Karolinska Institutet, Stockholm, Sweden*
- 2017 Molecular models of hydrogen sulfide-mediated protection against oxidative stress  
*Invited Speaker at 90th Annual Meeting of Japanese Society for Bacteriology, Sendai, Japan*
- 2016 Some aspects of sulfur biology from a mechanistic chemist's perspective  
*Invited Seminar at the Center for Molecular Medicine Cologne University Koeln, Germany*
- 2016 Chemical aspects of sulfane sulfur biology  
*Invited Speaker at the Tohoku University Graduate School of Medicine, Sendai, Japan*
- 2016 Advances and challenges in the field of H<sub>2</sub>S biology  
*Invited Speaker at the Dojindo Inc. HQs in Kumamoto, Japan*
- 2016 Bio-chemical aspects of thiol oxidation  
*Invited Seminar Kyoto University, Kyoto, Japan*
- 2016 Molecular pathways in persulfide biology  
*Invited Speaker at the 9th International Conference on the Biology, Chemistry, and Therapeutic Applications of Nitric Oxide held jointly with the 16th Annual Scientific Meeting of the Nitric Oxide Society of Japan, Sendai, Japan*
- 2016 Hydrogen sulfide, the new kid on the block in redox signaling  
*Invited Speaker at the Society for Free Radical Research-Europe, Budapest, Hungary*

- 2016 Insights into the molecular pathways of persulfide-mediated redox signaling  
*Invited Speaker at the 4th International Conference on the Biology of Hydrogen Sulfide, Napoli, Italy*
- 2015 Protein persulfides: Insights into the molecular mechanisms of H<sub>2</sub>S signaling  
*Invited plenary lecture at the Joint Meeting of the Societies for Free Radical Research Australasia and Japan, Christchurch, New- Zealand*
- 2015 Mechanistic chemical perspective of thiol redox biology  
*Invited Speaker at the Thiol-based redox switches in life sciences ESF-EMBO conference, Sant Feliu de Guixols, Spain*
- 2015 Superoxide-mediated post-translational modification of tyrosine residues  
*Invited Speaker at the Society for Free Radical Research- Europe meeting Stuttgart, Germany*
- 2015 Hydrogen sulfide and redox signaling  
*Invited Speaker at the "Redox Regulation, Oxidative Stress, and Selenoproteins." Medical University of South Carolina in Charleston, S.C.*
- 2015 Mechanistic Chemical Perspective of Hydrogen Sulfide Signaling  
*Invited Speaker at the 3rd European Conference on the Biology of Hydrogen Sulfid, Athens, Greece*
- 2015 Mechanistic Chemical Perspective of Hydrogen Sulfide Signaling  
*Invited Speaker at the „RISE Enhancing Biomedical Sciences and Biomedical Engineering in Science and Technology" Mayagüez, Puerto Rico*
- 2015 Redox biochemistry of thiol proteins and hydrogen sulfide  
*Invited Seminar LSU Health Shreveport, USA,*
- 2014 Mechanistic consideration of sulfide- versus polysulfide-mediated signaling events from a chemist's perspective  
*Invited Speaker at the Third International Conference on the Biology of Hydrogen Sulfide and COST meeting, Kyoto, Japan*
- 2014 Tools and techniques for gasotransmitters detection; working with gasotransmitters  
Chemical aspects of gasotransmitter signaling  
*Invited Trainer at the Training School on Gasotransmitters Biology and Chemistry, Capri, Italy*
- 2014 Kinetics and mechanisms of thiol redox reactions in relation to their biological functions  
*Invited Talk at the Redox Biology Seminars, Heidelberg DKFZ, Germany*
- 2013 Redox Proteomics at the National Institute of Oncology;  
Molecular mechanisms of BRAF V600E inhibition and acquired resistance to inhibitors of the MAPK pathway in melanoma malignum. Potential roles of Redox Regulation.  
*2 Invited lecture at the Hungarian Oncologists' Society's Annual Scientific Chemotherapy Congress*
- 2013 Kinetics and mechanisms of thiol oxidation in biological systems  
*Lecture at the Debrecen Colloquium on Inorganic Reaction Mechanisms 2013 Conference, Debrecen, Hungary*
- 2013 Scavenging of doxorubicin-induced peroxide species by peroxiredoxin 2 in red blood cells  
*Lecture at the Eu-ROS COST meeting, Budapest, Hungary*
- 2013 Chemical aspects of hydrogen sulfide measurements in physiological samples  
*Invited lecture at the European Network on Gasotransmitters COST meeting, Athens, Greece*
- 2012 Kinetics and Mechanisms of Thiol Oxidation in Biological Systems  
*Invited plenary lecture at the Natural Products and Related Redox Catalysts: Basic Research and Application in Medicine and Agriculture, Aveiro, Portugal*
- 2012 Some Redox- and Coordination-Chemical Properties of Hydrogen Sulfide in Relation to its Biological Activities  
*Invited lecture at the European Network on Gasotransmitters COST meeting, Budapest, Hungary*
- 2012 Redox Chemical Studies of Biological Thiols  
*Invited seminar at Saarbrücken University, Saarbrücken, Germany*
- 2012 Interactions of Hydrogen Sulfide with Neutrophil-Derived Oxidants  
*Invited lecture at the First EU Conference on the Biology of Hydrogen Sulfide, Smolnice, Slovak Republic*
- 2012 Reactive Oxygen Species in Cancer Research  
*Invited lecture at the Hungarian Oncologists' Society's Annual Scientific Chemotherapy Congress*
- 2011 Novel Mechanisms for Superoxide Toxicity  
*Invited seminar at Debrecen University, Department of Inorganic and Analytical Chemistry Debrecen*

- 2010 Mechanistic Investigation of the High Reactivity and Specificity of Peroxiredoxins with Peroxides *Invited speaker at the 19<sup>th</sup> Annual Meeting of the Society for Free Radical Research Australasia, Akaroa, New Zealand*
- 2010 Chemical Aspects of Thiol Oxidation in Biology  
*Invited seminar at the Puget Sound Blood Center, Seattle, WA, USA*
- 2010 The Jekyll and Hide Roles of Superoxide in vivo: Mechanistic Investigation of Superoxide Mediated Tyrosine Modifications on Peptides and Proteins  
*Invited seminar at the University of Washington, Department of Medicine, Seattle, WA, USA*
- 2010 Addition of superoxide to tyrosyl radicals in peptides and proteins; a potential route for superoxide toxicity  
*Selected speaker at the Oxygen Radicals Gordon Research Conference, Ventura, CA, USA*
- 2009 Rapid reaction of superoxide with insulin-tyrosyl radical results in hydroperoxide formation, a kinetic study.  
*Selected speaker at the 5<sup>th</sup> Joint Meeting of the Society for Free Radical Research (Australia and Japan) with Mutagenesis and Experimental Pathology Society of Australia, Sydney, Australia*
- 2009 Neutrophil mediated oxidation of opioid peptides  
*Invited speaker at the Brain Health & Repair Research Centre Conference, Dunedin, New Zealand*
- 2009 Mechanisms of thiol oxidation in biology. A chemist's perspective  
*Invited seminar at the University of Otago, Dunedin, Department of Chemistry, New Zealand*
- 2009 Redox chemistry of neutrophil-derived oxidants  
*Invited seminar at the University of Otago, Dunedin, Department of Chemistry, New Zealand*
- 2009 Superoxide mediated radical reactions of opioid peptides and proteins  
*Invited seminar at the University of Otago, Dunedin, Department of Chemistry, New Zealand*
- 2008 Radical targets for superoxide toxicity  
*Invited seminar at The Swiss Federal Institute of Technology (ETH), Department of Chemistry, Zurich*
- 2007 Neutrophils, our in vivo cleaning staff, use chlorine bleach to disinfect  
*Invited seminar at Debrecen University, Department of Inorganic and Analytical Chemistry Debrecen*
- 2007 Thiocyanate is an Efficient Endogenous Scavenger of the Putative Eosinophilic Killing Agent Hypobromous Acid  
*Invited speaker at the 5<sup>th</sup> International Meeting on Human Peroxidases, Akaroa, New Zealand*
- 2005 Reactive Sulfur Species: Kinetics and Mechanisms of the Oxidation of Cystine Derivatives by Hypochlorous Acid  
*Invited speaker at the 57<sup>th</sup> Southeast/61<sup>st</sup> Southwest Joint Regional Meeting of the American Chemical Society, Memphis, Tennessee, USA*

### **Invited representative at EU Science Policy and Consortial meetings**

- 2019 Member of the Hungarian Ministerial Delegation at the 61st Session of the IARC Governing Council meeting, Lyon, France
- 2019 Invited delegate to meet the top management of MD Anderson Cancer Center and the Hungarian Consulate in Houston in order to lay the foundations for a bilateral scientific cooperation between the MD Anderson Cancer Center and the National Institute of Oncology
- 2019 Participant at the JBC Editorial Board meeting, Orlando, Florida, USA
- 2019 Participant at the INTENT meeting, Budapest, Hungary
- 2019 Participant at the EURACAN meeting, Paris, France
- 2018 Ministerial Delegate at the conference on "A mission-oriented approach to cancer in Europe: Boosting the social impact of innovative cancer research", the Vatican
- 2018 Ministerial Delegate at the 2<sup>nd</sup> Gago Conference on European Science Policy, Vienna, Austria
- 2018 Participant at the OECI Oncology Days, Poznan, Poland
- 2018 Representative of the Hungarian Oncologist Society at the EACR25, Amsterdam, Netherlands
- 2018 OECI auditor- Institut Curie, Paris, France
- 2018 Invited round table at the 1<sup>st</sup> Gago Conference on European Science Policy, Porto, Portugal
- 2018 Participant at the INTENT Steering Committee meeting, Aviano, Italy
- 2017 Ministerial Delegate at the Personalized Medicine in Cancer meeting, Brussels, Belgium
- 2017 Participant at the British Journal of Pharmacology annual editorial board meeting, London, England
- 2017 Participant at the JARC project General Assembly meeting, Milano, Italy
- 2017 Invited participant at the OECI Oncology Days, Brno, Czech Republic,

2017 Participant at the Euracan European Reference Network (ERN) project kick-off meeting, Lyon, France  
 2017 Delegate at 7<sup>th</sup> the Annual Oncology at the Limits, London, England  
 2016 Participant at the British Journal of Pharmacology annual editorial board meeting, London, England  
 2016 OECI auditor- Oslo University Hospital The Norwegian Radiumhospital, Oslo, Norway  
 2016 Invited speaker at closing conference of the BenchCan project, Brussels, Belgium  
 2016 Participant at the OECI Oncology Days, Brussels, Belgium  
 2016 Participant at the OECI Accreditation & Designation meeting and OECI Accreditation Auditors meeting, Cambridge, England  
 2016 Participant at the ERN project meeting, Brussels, Belgium  
 2016 BenchCan discussion at the Institute for Cancer Research and Cancer Center, Oslo, Norway  
 2016 Delegate at 6<sup>th</sup> the Annual Oncology at the Limits conference, London, England  
 2015 Participant at the Health Infoday on Joint Actions, Luxembourg, Grand Duchy of Luxembourg  
 2015 Participant at the 5<sup>th</sup> annual EurocanPlatform meeting, Brussels, Belgium  
 2015 Invited participant at the 2<sup>nd</sup> conference on ERNs, Lisbon, Portugal  
 2015 Invited participant at the OECI General Assembly, Porto, Portugal  
 2015 Participant at the EurocanPlatform meeting, Stockholm, Sweden  
 2015 BenchCan Projekt- Pilot site meeting, Amsterdam, Netherlands  
 2015 Delegate at the Oncology ath the Limits conference, Amsterdam, Netherlands  
 2014 BenchCan Projekt- 4<sup>th</sup> Core Group meeting, Brussels, Belgium  
 2014 BenchCan Projekt- Pilot site visit, Porto, Portugal  
 2014 European collaboration in oxidative stress and redox biology- MC/WG meeting, Padova, Italy  
 2014 Participant at the 4<sup>th</sup> annual EurocanPlatform meeting, Algarve, Portugal  
 2014 Participant at the BenchCan pilot workshop meeting, Amsterdam, Netherlands  
 2014 Participant at the 23<sup>rd</sup> Biennial EACR Congress and invited delegate at the EACR council meeting, München, Germany  
 2014 Participant at the OECI Oncology Days, Cluj-Napoca, Romania  
 2014 Participant at the BenchCan meeting, Brussels, Belgium  
 2014 Participant at the COST 3<sup>rd</sup> Working Group Meeting, Messina, Italy  
 2014 Participant at the EurocanPlatform meeting, Amsterdam, Netherlands  
 2013 2<sup>nd</sup> Core Group Meeting of the BenchCan Project, OECI BenchCan meeting, Amsterdam, Netherlands  
 2013 Participant at the COST Gasotransmitters meeting Exeter, England  
 2013 Participant at the 3<sup>rd</sup> annual EurocanPlatform meeting, Barcelona, Spain  
 2013 Participant at the 2<sup>nd</sup> COST Gasotransmitters meeting, Smolenice, Slovakia  
 2013 Participant at the Healthcare World Research and Innovation Congress, Brussels, Belgium  
 2013 Invited speaker at the WG3 COST Gasotransmitters meeting Athen, Greece  
 2013 Participant at the OECI Oncology Days, Brussels, Belgium  
 2012 Participant at the EurocanPlatform WP3 meeting, Oslo, Norway  
 2012 Participant at the 2<sup>nd</sup> annual meeting of EurocanPlatform, Amsterdam, Netherlands  
 2012 Participant at the COST Gasotransmitters meeting, Budapest, Hungary  
 2012 Participant at the ESMO 2012 Congress, Vienna, Austria  
 2012 Participant at the EPAAC Research Forum, Brussels, Belgium  
 2012 Participant at the „European Forum on Oncology” conference, Berlin, Germany  
 2011 Participant at the EurocanPlatform WP3 meeting, Stockholm, Sweden

## **Awards**

2019 Bolyai Plakett (Recognition of the Hungarian Academy of Sciences for the best scientific achievement among János Bolyai Research Scholars)  
 2015 János Bolyai Research Scholar of the Hungarian Academy of Sciences  
 2011-2015 Marie Curie International Reintegration Grant Fellow  
 2011 ESF-EMBO Young Investigator Travel Award to the “Glutathione and Related Thiols in Living Cells ESF-EMBO symposium”.  
 2006 Young Investigator Travel Award to the “5<sup>th</sup> International Meeting on Human Peroxidases”  
 2001 Knut and Alice Wallenberg’s Foundation Award  
 1999 Second place at the XXIV. National Science Competition for Undergraduate Students, Hungary  
 1993 Finalist of the National Chemistry Competition for high school students, Hungary

## Scholarships

2003	Ph.D. scholarship at The Royal Institute of Technology (KTH), Stockholm, Sweden
2001	Exchange Ph.D. student at KTH for 1 semester (Socrates Erasmus scholarship)
1999 - 2000	Exchange undergraduate student at KTH for 2 semesters (Socrates Erasmus scholarship)
1998	Exchange undergraduate student at KTH for 1 semester (Grant for talented young scientists, sponsored by Schering Plough pharmaceutical company)

## Foreign Languages

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<i>Hungarian:</i>	Native language
<i>English:</i>	Fluent, state proficiency exam, special certificate in chemistry
<i>Swedish:</i>	Conversational level (Elementary and Advanced Beginners courses and certificates at KTH)
<i>German:</i>	Conversational level (Elementary course and certificate at DU)

## Organizational, Advisory or Chair Roles at Meetings

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2020	Organizer at the 6 <sup>th</sup> World Congress on Hydrogen Sulfide in Biology and Medicine
2018	Session chair Nitric Oxide Society meeting dedicated to the 20 <sup>th</sup> anniversary of the 1998 Nobel Prize in Medicine for the discovery of NO as a signaling molecule, Oxford, England
2018	Chair and organizer of the Redox Biology section at the 2018 FEBS conference
2018	Session chair/organizer at the 2018 SFRRRI, Lisboa, Portugal
2018	Member of the International Advisory Board at the 5th World Congress on Hydrogen Sulfide in Biology and Medicine
2017	Member of the Scientific Advisory Board and local organizer at the Plant and Human Sulfur Biology Conference
2017	Co-Chair and organizer of the „Kékgolyó napok” seminar series
2016	Member of the International Scientific Committee of the 9th International Conference on the Biology, Chemistry, and Therapeutic Applications of Nitric Oxide held jointly with the 16th Annual Scientific Meeting of the Nitric Oxide Society of Japan
2016	Member of the International Advisory Board at the 4th International Conference on the Biology of Hydrogen Sulfide
2016	Member of the International Scientific Committee of the Society for Free Radical Research-Europe
2015	Member of the Scientific Organizing Committee of the XXXI. National Meeting of Hungarian Oncologists
2013	2nd European Conference on the Biology of Hydrogen Sulfide, Chair and advisor of the ”Cancer and Therapeutic potential of H <sub>2</sub> S manipulation” section

## Society Memberships

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2018-	European Society for Medical Oncology
2017-	European Association for Cancer Research- Hungarian Representative
2017-	Society of Hungarian Oncologists’ Secretary-General
2012 -	European Network on Gasotransmitters BM-1005 COST Management committee
2013 -	EU-ROS BM-1203 COST Management committee substitute
2012-	Society of Hungarian Young Oncologists
2011-	Society of Hungarian Oncologists’
2008 -	Society for Free Radical Biology and Medicine, USA
2007 -	Society for Free Radical Research, Australia
2007 - 2008	Society for Biochemistry and Molecular Biology, New Zealand
2006 - 2007	American Association for the Advancement of Science
2005 -	American Chemical Society
2001 -	Alumni for Europe

## Research Output

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### Research Interests

#### Research in my Laboratory

The major area of my scientific interest is centered on reprogramming of metabolic and cellular signaling pathways in cancer. The major focus of our research activities lies within redox regulation of protein functions, antioxidant defense mechanisms and alterations of transulfuration pathways. These processes play major roles in oncogenesis, tumor progression, immune-response/suppression and in the development of resistance to current therapies. Therefore, better understanding the underlying fundamental mechanistic reasons for the observed fundamental alterations in these processes in cancer vs normal vs immune cells will likely lead to novel and more effective therapeutic interventions.

#### Activities in EU Research Consortia

I represent the National Institute of Oncology as the coordinator in a number of EU projects (see above). Our wide scale research activities are dedicated to improving cancer care in a patient centered pan-European manner.

### Publications

\*Corresponding author

#### Book Chapters

6. Dorottya Garai, Zoltán Pálinkás, József Balla, Anthony J. Kettle, **Péter Nagy**\*  
*Measurements for sulfide-mediated inhibition of myeloperoxidase activity*  
**Methods Mol Biol.** Beltowski J, editor Springer, in press; 2019.
5. Éva Dóka, Elias S. J. Arnér, Edward E. Schmidt, **Péter Nagy**\*.  
*ProPerDP, a Protein Persulfide Detection Protocol*  
**Methods Mol Biol.** Beltowski J, editor Springer, in press; 2019.
4. Christopher Kevil, Miriam M. Cortese-Krott, **Péter Nagy**, Martin Feelisch, Csaba Szabo  
*Cooperative interactions between NO and H<sub>2</sub>S: chemistry, biology, physiology, pathophysiology*  
**Nitric Oxide Biology and Pathobiology** 3<sup>rd</sup> Edition Ignarro L.J., Ed. Elsevier: (2017) 57-83 Invited chapter.
3. **Péter Nagy**\*  
*Mechanistic Chemical Perspective of Hydrogen Sulfide Signaling*  
**Methods in Enzymology**, Hydrogen Sulfide in Redox Biology Part A & B (2015) 554, 3-29. Invited chapter. [PubMed Link](#)
2. **Péter Nagy**\* and Christine C. Winterbourn  
*Redox chemistry of biological thiols*  
**Advances in Molecular Toxicology**, Fishbein, J.C., Ed. Elsevier: Amsterdam, The Netherlands, (2010), Vol. 4, pp. 183-222. Invited review.
1. **Péter Nagy**; Julie D. Becker; Rachael C. Mallo and Michael T. Ashby  
*The Jekyll and Hyde Roles of Cysteine Derivatives During Oxidative Stress*  
**New Biocides Development: The Combined Approach of Chemistry and Microbiology**, Zhu, P., Ed. ACS Press: Washington, D.C., (2007), pp. 193-212.

#### Peer Reviewed Research Articles

61. Tamás Ditrói, Attila Nagy, Diego Martinelli, András Rosta, Viktor Kožich, **Péter Nagy**\*  
*Comprehensive analysis of how experimental parameters affect H<sub>2</sub>S measurements by the monobromobimane method*  
**Free Radical Biology and Medicine** (2019) 136, 146-158. [PubMed Link](#)



60. John L. Wallace, **Péter Nagy**, Troy D. Feener, Thibault Allain, Tamás Ditrói, David J. Vaughan, Marcelo N. Muscara, Gilberto de Nucci & Andre G. Buret  
*A Proof-of-Concept, Phase 2 Clinical Trial of the Gastrointestinal Safety of a Hydrogen Sulfide-Releasing Anti-Inflammatory Drug*  
**British Journal of Pharmacology** (2019) Epub ahead of print [PubMed Link](#)
59. Katalin Éva Sikura, Tamás Szerafin, László Potor, Melinda Oros, **Péter Nagy**, Gábor Méhes, Zoltán Hendrik, Abolfazl Zarjou, Anupam Agarwal, Niké Posta, Roberta Torregrossa, Matthew Whiteman, György Balla, József Balla  
*Hydrogen sulfide abrogate heart valve calcification: implications for calcific aortic valve disease*  
**British Journal of Pharmacology** (2019) epub ahead of print [PubMed Link](#)
58. Joseph Lin, Masahiro Akiyama, Iris Bica, Faith T. Long, Catherine F. Henderson, Robert N. Goddu, Valeria Suarez, Blaine Baker, Tomoaki Ida, Yasuhiro Shinkai, **Péter Nagy**, Takaaki Akaike, Jon M. Fukuto, and Yoshito Kumagai  
*The Uptake and Release of Polysulfur Cysteine Species by Cells: Physiological and Toxicological Implications*  
**Chemical Research in Toxicology** (2019) 32(3), 447-455. [PubMed Link](#)
57. Hisyam Abdul Hamid, Akira Tanaka, Tomoaki Ida, Akira Nishimura, Tetsuro Matsunaga, Shigemoto Fujii, Masanobu Morita, Tomohiro Sawa, Jon M. Fukuto, **Péter Nagy**, Ryouhei Tsutsumi, Hozumi Motohashi, Hideshi Ihara, and Takaaki Akaike  
*Polysulfide stabilization by tyrosine and hydroxyphenyl-containing derivatives that is important for a reactive sulfur metabolomics analysis*  
**Redox Biology** (2019) 21, 101096. [PubMed Link](#)
56. **Péter Nagy\***, Günter Schwarz and Stanislav Kopriva  
*Highlighted mechanistic aspects in the chemical biology of reactive sulfur species*  
**British Journal of Pharmacology** (2019) 176, 511-513. [PubMed Link](#)
55. Virág Bogdándi, Tomoaki Ida, Thomas R Sutton, Christopher Bianco, Tamás Ditrói, Grielof Koster, Hillary A Henthorn, Magda Minnion, John P Toscano, Albert van der Vliet, Michael D Pluth, Martin Feelisch, Jon M Fukuto, Takaaki Akaike and **Péter Nagy\***  
*Speciation of Reactive Sulfur Species and their Reactions with Alkylating Agents: Do we have any clue about what is present inside the cell?*  
**British Journal of Pharmacology** (2019) 176, 646-670. [PubMed Link](#)
54. Christopher L. Bianco, Takaaki Akaike, Tomoaki Ida, **Péter Nagy**, John P. Toscano, Yoshito Kumagai, Catherine F. Henderson, Robert N. Goddu, Joseph Lin and Jon M. Fukuto  
*The Reaction of Hydrogen Sulfide with Disulfides: Formation of a Stable Trisulfide and Implications to Biological Systems*  
**British Journal of Pharmacology** (2019) 176, 671-683. [PubMed Link](#)
53. Kozich Viktor, Ditrói Tamás, Sokolová Jitka, Křížková Michaela, Krijt Jakub, Ješina Pavel, **Nagy Péter\***  
*Metabolism of sulfur compounds in homocystinurias*  
**British Journal of Pharmacology** (2019) 176, 594-606. [PubMed Link](#)
52. Anke Wind, Joris van Dijk, Isabelle Nefkens, Wineke van Lent, **Péter Nagy**, Ernestas Janulionis, Tuula Helander, Francisco Rocha-Goncalves and Wim van Harten  
*Development of a benchmark tool for cancer centers; results from a pilot exercise*  
**BMC Health Services Research** (2018) 18, 764. [PubMed Link](#)
51. Jon M. Fukuto, Louis J. Ignarro, **Péter Nagy**, David A. Wink, Christopher G. Kevil, Martin Feelisch, Miriam M. Cortese-Krott, Christopher L. Bianco, Yoshito Kumagai, Adrian J. Hobbs, Joseph Lin, Tomoaki Ida, Takaaki Akaike  
*Biological Hydropersulfides and Related Polysulfides: A New Concept and Perspective in Redox Biology*  
**FEBS Letters** (2018) 592(12), 2140-2152 [PubMed Link](#)

50. László Potor, **Péter Nagy**, Gábor Méhes, Zoltán Hendrik, Viktória Jeney, Dávid Pethő, Anita Vasas, Zoltán Pálkás, Enikő Balogh, Ágnes Gyetvai, Matthew Whiteman, Roberta Torregrossa, Mark E. Wood, Sándor Olvasztó, Péter Nagy, György Balla, József Balla  
*Hydrogen Sulfide Abrogates Hemoglobin-Lipid Interaction In Atherosclerotic Lesion*  
**Oxidative Medicine and Cellular Longevity** (2018) Volume 2018 [PubMed Link](#)
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