SHORT CURRICULUM VITAE

Professor Kleopas A. KLEOPA, MD, PhD, FAAN, FEAN

6 Iroon Avenue

P.O. Box 23462, 1683 Nicosia, Cyprus

Phone: +357-99353544, +357-22358600, Email: kleopa@cing.ac.cy

Current positions

Senior Consultant Neurologist, Head of Neuroscience Department

Professor, Cyprus School of Molecular Medicine

Coordinator, Center for Neuromuscular Disorders

Head of Neuropathology Lab

The Cyprus Institute of Neurology and Genetics

EDUCATION

1987-1993 Medical Studies, University of Würzburg Medical School, Germany

29/10/1993 Medical Degree (grade: "very good"), University of Würzburg Medical School, Germany

1991-1994 Doctoral Thesis Project in the Psychiatry - Laboratory of Clinical Neurochemistry, University of Würzburg, Germany

Title: «"Quantitative autoradiographic examination of Adenosin-A1 receptors in post-mortem human hippocampus" (*original in German*: "Quantitative Autoradiographische Untersuchung von Adenosin-A1-Rezeptoren im postmortem mensclichen Hippocampus")

18/08/1994 Doctor of Medicine Title Award (grade: "*magna cum laude*"), Medical Faculty of the University of Würzburg

MEDICAL TRAINING

1994-1995 Internship in Neurology, Neurological Clinic of the University, Würzburg, Germany

1995-1996 Internship in Internal Medicine, Medical College of Pennsylvania, Philadelphia, USA

1996-1999 Resident in Neurology, Medical College of Pennsylvania and Hahnemann/Drexel University, Philadelphia

1-6/1999 Chief Resident in Neurology, Medical College of Pennsylvania and Hahnemann/Drexel University, Philadelphia

1999-2001 Clinical Fellowship in EMG and Neuromuscular Disorders, University of Pennsylvania Medical Center, Philadelphia

2000-2002	Postdoctoral Research Fellowship, Funded by National Multiple Sclerosis Society, University of Pennsylvania
1999-2001	Participation in Muscular Dystrophy Association (MDA) Clinic, Children's Hospital of Philadelphia
2000-2001	Patient Oriented Research Training Program, University of Pennsylvania, Clinical Research Center

POSITIONS HELD AND ACADEMIC EXPERIENCE

2001/02	Clinical Instructor of Neurology, University of Pennsylvania Medical Center, Philadelphia, USA
9/2002-	Senior Consultant Neurologist, Cyprus Institute of Neurology and Genetics
11/2007-	Head of Neurology Clinic and Neuroscience Laboratory, Cyprus Institute of Neurology and Genetics
2/2012-	Professor, Cyprus School of Molecular Medicine
9/2012-	Honorary Professor in Neurology, St. Georges University of London Medical School at the University of Nicosia
1/2015-	Coordinator, Neuroscience Postgraduate Program at the Cyprus School of Molecular Medicine
2/2020-	Coordinator, Center for Neuromuscular Disorders, The Cyprus Institute of Neurology and Genetics
2/2020-	Head of Neuroscience Department, Cyprus Institute of Neurology and Genetics
10/2021-	Coordinator for Research, The Cyprus Institute of Neurology and Genetics

Professional licenses and specialist board certification

1995	License to practice medicine in Germany
1999	Medical License for the State of Pennsylvania, USA
2000	Registration as a Medical Doctor in Cyprus
2000	Recognition as a Specialist Neurologist, Ministry of Health, Cyprus
2002	Diplomate, American Board of Psychiatry and Neurology, Inc.

Languages spoken

Greek (mother language), English, German (professionally fluent)

HONORS AND AWARDS

1987-1989 Scholarship of the Cyprus Government to attend Medical School
1990-1993 Scholarship of the German Academic Exchange Service (DAAD)
1990 Participation in Erasmus Program for medical students with distinction in Neuroscience, Leiden, the Netherlands
1999 Neurology Teaching Award from Medical Students, Class of 1999, MCP-Hahnemann University
2000-2003 Advanced Postdoctoral Fellowship Award, National Multiple Sclerosis Society USA
2000-2002 Development Grant Award, USA Muscular Dystrophy Association
2004 Nominated member of the European Science Foundation Steering committee for Networking Neurosciences
2009 Fellowship Award, International Peripheral Nerve Society 2009 Meeting
2016-19 Member of the European Science Foundation (ESF) College of Expert Reviewers
2015 European Academy of Neurology Investigator Award 2015 from the Scientific Subspecialty Panel on Neuropathies
2017 Cyprus National Distinguished Researcher Award, Research Promotion Foundation
2019 Elected Fellow of the American Academy of Neurology
2021 Elected Fellow of the European Academy of Neurology

Professional Memberships and Other Academic Activities

2002 Diplomate, American Board of Psychiatry and Neurology, Inc
1996- Member of the American Academy of Neurology
2000- Member of the American Association of Neuromuscular and Electrodiagnostic Medicine
2002- Member of the Cyprus Neurological Society
2003- Member of the Society for Neuroscience (USA)
2003- Founding Member of the Cyprus Society of Human Genetics
2004-14 Member of the Board of the Cyprus Neurological Society
2005- Member of the World Muscle Society
2005- Scientific Advisor, Cyprus Myasthenia Gravis Association
2005- Member of the European Academy of Neurology
2008- Member of the Peripheral Nerve Society
2010- Member of the International Society of Neuroimmunology
2006-09 President of the Cyprus Bioethics Review Committee for Biomedical Research
2010-14 Cyprus representative in the European Union of Medical Specialties (UEMS)-Section of Neurology
2011-13 Cyprus representative in the EU Program Committee Health for FP7
2011-13 Cyprus representative in the EU Innovative Medicines Initiative (IMI)
2015- Member of the Cyprus National Bioethics Committee
2018- Member of the Scientific Advisory Board, Charcot-Marie-Tooth Association (CMTA) USA
2019- Member of the Scientific Advisory Board, Gene Therapy Initiative for Neurofibromatosis-I, Gilbert Family Foundation, USA

2019- Elected Board Member of the International Charcot-Marie-Tooth and Related Disorders (CMTR) Consortium/Peripheral Nerve Society
2019- Elected Fellow of the American Academy of Neurology (FAAN)
2021- Member of the Education Committee, Peripheral Nerve Society
2021- Member of the Scientific Program Committee, 2022 Peripheral Nerve Society Meeting

Reviewer for scientific journals (2000-today): Journal of Neuroscience, Acta Neuropathologica, Muscle and Nerve, Journal of Neurology, Brain, BioMed Central Neurology, Biotechnology Journal, Journal of Inherited Metabolic Disease, Neuron Glia Biology, Acta Myologica, Journal of the Peripheral Nervous System, PLoS Genetics, Journal of Neuropathology and Experimental Neurology, Neurobiology of Disease, Neuromolecular Medicine, PLos One, Glia, Gene Therapy, Frontiers in Molecular Neuroscience, Scientific Report, Nature Communications, Neurotherapeutics, and others.

Reviewer for Research Funding Organizations (2006-today): National Multiple Sclerosis Society, USA, The Wellcome Trust, UK, Association Française contre les Myopathies-AFM, France, ARSEP, France, European Science Foundation (ESF), French National Research Agency, European Leukodystrophy Association (ELA), France, Vaincre les Maladies Lysosomales (VML), France, Hellenic Foundation for Research and Innovation, MS Society Australia, Prinses Beatrix Spierfonds Netherlands, Review Panel Expert for «Medical and Health Sciences» of the European Co-operation in the Field of Scientific and Technical Research - COST Association, European Commission 2015-19 MSCA proposals, 2016 Personalized Medicine Call evaluation, invited expert, COST-2016-2019 Review Panel

REVIEW OF SCIENTIFIC WORK and CONTRIBUTION TO SCIENCE

Work outlined below was selected from a career total of 103 full papers, 16 book chapters and over 110 oral or poster presentations (more than 6,400 citations in total to date, h-index=36).

http://scholar.google.com/citations?user=uqquFR4AAAAJ&hl=en
http://www.ncbi.nlm.nih.gov/pubmed/?term=kleopa

1. A central objective of my research activities in the last 20 years has been the **investigation of cellular and molecular mechanisms that lead to the manifestation of neuropathy and encephalopathy** in patients with inherited mutations in the gap junction protein connexin32 (Cx32), causing X-linked Charcot-Marie-Tooth Disease (CMT1X). While all of these patients develop peripheral neuropathy, CNS phenotypes occur only in a subset, for reasons that are not well understood. Gap junctions are crucial for the ability of glia cells and neurons to maintain active communication and to preserve homeostasis in the functioning nervous system. Through a series of publications, we have elucidated the repertoire of Schwann cell and oligodendroglial gap junction protein expression, their anatomic and functional relationship and possible interactions in health and disease. I contributed the discovery of Cx29 in glial cells, and I generated novel mouse models expressing Cx32 mutations in CNS and PNS, clarifying the loss of function mechanism involved. Furthermore, I described the early

axonal pathology in models of CMT1X and characterized novel Cx32 mutations. *Related publications*:

a. Kleopa KA, Yum SW, Scherer SS (2002) Cellular mechanisms of connexin32 mutations associated with CNS manifestations. *J. Neurosci. Res.* 68:522-534.

b. Altevogt BM*, Kleopa KA*, Postma FR, Scherer SS, Paul DL (2002) Connexin29 Is Uniquely Distributed within Myelinating Glial Cells of the Central and Peripheral Nervous Systems *J. Neurosci.,* 22: 6458-6470. (*equal contribution)

c. Kleopa KA, Orthmann JL, Enriquez A, Paul DL, Scherer SS (2004) Unique distribution of gap junction proteins connexin29, connexin32, and connexin47 in oligodendrocytes, *Glia,* 47:346-57.

d. Sargiannidou I, Vavlitou N, Aristodemou S, Hadjisavvas A, Kyriacou K, Scherer SS, Kleopa KA (2009). Connexin32 mutations cause loss of function in Schwann cells and oligodendrocytes leading to PNS and CNS myelination defects. *J Neurosci*, 29:4748-4761.

e. Sargiannidou I, Kim GH, Kyriakoudi S, Eun BL, Kleopa KA. (2015) A start codon CMT1X mutation associated with transient encephalomyelitis causes complete loss of Cx32. *Neurogenetics*, 16:193-200.

f. Olympiou M, Sargiannidou I, Markoullis K, Karaiskos C, Kagiava A, Kyriakoudi S, Abrams CK, Kleopa KA (2016). Systemic inflammation disrupts oligodendrocyte gap junctions and induces ER stress in a model of CNS manifestations of X-linked Charcot-Marie-Tooth disease. *Acta Neuropathol Commun*. Sep 1;4(1):95.

g. Kyriakoudi S, Sargiannidou I, Kagiava A, Olympiou M, Kleopa KA (2017) Golgi-retained Cx32 mutants interfere with gene addition therapy for CMT1X. Hum Mol Genet. 2017 26:1622-163.

h. Stavrou M, Sargiannidou I, Christofi T, **Kleopa KA**. Genetic mechanisms of peripheral nerve disease. Neurosci Lett. 2020 Nov 26:135357. doi: 10.1016/j.neulet.2020.135357.

j. Stavropoulos F, Sargiannidou I, Potamiti L, Kagiava A, Panayiotidis MI, Bae JH, Yeom SC, Lee JY, **Kleopa KA**. Aberrant Mitochondrial Dynamics and Exacerbated Response to Neuroinflammation in a Novel Mouse Model of CMT2A. Int J Mol Sci. 2021 Oct 26;22(21):11569. doi: 10.3390/ijms222111569.PMID: 34769001

2. In addition to clarification of the molecular mechanisms of CMT1X neuropathy and encephalopathy, and based on results from this work, we have recently developed **novel gene therapy approaches** to replace neuropathy-associated genes specifically in myelinating glial cells of the peripheral and central nervous systems. Using relevant models of neuropathy and leukodystrophy, we have explored world-wide innovative gene therapy approaches using lentiviral and AAV vectors for cell-targeted expression based on cell-specific and myelin-specific promoters. *Related publications*:

a. Kagiava A, Sargiannidou I, Bashiardes S, Richter J, Schiza N, Christodoulou C, Gritti A, Kleopa KA. (2014) Gene delivery targeted to oligodendrocytes using a lentiviral vector. *J Gene Med*. 16(11-12):364-73.

b. Schiza N., Sargiannidou I., Kagiava A., Karaiskos C., Nearchou M., Kleopa KA (2015) Transgenic replacement of Cx32 in gap junction deficient oligodendrocytes rescues the phenotype of a hypomyelinating leukodystrophy model. *Hum Mol Genet*, 24: 2049-64.

c. Sargiannidou I, Kagiava A, Bashiardes S, Richter J, Christodoulou C, Scherer SS, Kleopa KA (2015) Intraneural GJB1 gene delivery improves nerve pathology in a model of CMT1X. *Annals of Neurology*, 78:303-316.

d. Kagiava A, Sargiannidou I, Theophilidis G, Karaiskos C, Richter J, Bashiardes S, Schiza N, Nearchou M, Christodoulou C, Scherer SS, Kleopa KA (2016) Intrathecal gene therapy rescues a model of demyelinating peripheral neuropathy. *Proc Natl Acad Sci U S A,* 113 (17):e2421-9.

e. Georgiou E, Sidiropoulou K, Richter J, Papaneophytou C, Sargiannidou I, Kagiava A, von Jonquieres G, Christodoulou C, Klugmann M, Kleopa KA (2017) Gene therapy targeting oligodendrocytes provides therapeutic benefit in a leukodystrophy model, *Brain,* 140:599-616.

f. Kagiava A, Karaiskos C, Richter J, Tryfonos C, Lapathitis G, Sargiannidou I, Christodoulou C, Kleopa KA (2018). Intrathecal gene therapy in mouse models expressing CMT1X mutations. Hum Mol Genet. 27: 1460-1473.

g. Schiza N, Georgiou E, Kagiava A, Médard J-J, Richter J, Tryfonos C, Sargiannidou I, Heslegrave AJ, Rossor AM, Zetterberg H, Reilly MM, Christodoulou C, Chrast R, Kleopa KA (2019). Gene replacement therapy in a model of Charcot-Marie-Tooth 4C neuropathy, *Brain*. 2019 May 1;142(5):1227-1241.

h. Kagiava A, Richter J, Tryfonos C, Karaiskos C, Heslegrave AJ, Sargiannidou I, Rossor AM, Zetterberg H, Reilly MM, Christodoulou C, **Kleopa** KA. Gene replacement therapy after neuropathy onset provides therapeutic benefit in a model of CMT1X. Hum Mol Genet. 2019, 28: 3528-3542.

j. Kagiava A, Karaiskos C, Richter J, Tryfonos C, Jennings MJ, Heslegrave AJ, Sargiannidou I, Stavrou M, Zetterberg H, Reilly MM, Christodoulou C, Horvath R, **Kleopa KA**. AAV9-mediated Schwann cell-targeted gene therapy rescues a model of demyelinating neuropathy. Gene Ther. 2021, doi: 10.1038/s41434-021-00250-0.

j. Stavrou M, Sargiannidou I, Georgiou E, Kagiava A, **Kleopa KA**. Emerging Therapies for Charcot-Marie-Tooth Inherited Neuropathies. Int J Mol Sci. 2021 Jun 3;22(11):6048. doi: 10.3390/ijms22116048.

k. Kagiava A, Richter J, Tryfonos C, Leal-Julià M, Sargiannidou I, Christodoulou C, Bosch A, Kleopa KA. Efficacy of AAV serotypes to target Schwann cells after intrathecal and intravenous delivery. Sci Rep. 2021 Dec 2;11(1):23358. doi: 10.1038/s41598-021-02694-1.PMID: 34857831

3. A further line of research in my lab has been the study of **glial connexin pathology in acquired demyelination**, using for study both multiple sclerosis postmortem human brain samples as well as the experimental encephalomyelitis (EAE) mouse model. Detailed analysis of disease brain samples has shown widespread glial connexin pathology with loss of gap junctions in oligodendrocytes not only in white and gray

matter lesions, but also in normal appearing tissue and in parallel development of astrogliosis and disconnection of astrocytes from oligodendrocytes. These changes correlate with inflammation and disease progression. Current ongoing work investigates the EAE mechanisms in highly active MS brain and in connexin deficient mouse models. *Related publications*:

a. Markoullis K, Sargiannidou I, Gardner C, Hadjisavvas A, Reynolds R, Kleopa KA (2012) Disruption of oligodendrocyte gap junctions in experimental autoimmune encephalomyelitis. *Glia*, 60:1053-66.

b. Markoullis K, Sargiannidou I, Schiza N, Hadjisavvas A, Roncaroli F, Reynolds R, Kleopa KA (2012) Gap junction pathology in multiple sclerosis lesions and in normal appearing white matter. *Acta Neuropathol*, 123:873-86.

c. Markoullis K, Sargiannidou I, Schiza N, Roncaroli F, Reynolds R, Kleopa KA (2014) Oligodendrocyte gap junction loss and disconnection from reactive astrocytes in multiple sclerosis grey matter. *J Neuropathol Exp Neurol*, 73(9):865-79.

d. Papaneophytou CP, Georgiou E, Karaiskos C, Sargiannidou I, Markoullis K, Mona Freidin M, Abrams CK, Kleopa KA (2018) Regulatory role of oligodendrocyte gap junctions in inflammatory demyelination. Glia, 66(12):2589-2603.

e. Papaneophytou C, Georgiou E, Kleopa KA. The role of oligodendrocyte gap junctions in neuroinflammation. Channels (Austin). 2019 Dec;13(1):247-263. doi: 10.1080/19336950.2019.1631107.

f. Angeli S, Kousiappa I, Stavrou M, Sargiannidou I, Georgiou E, Papacostas SS, **Kleopa KA**. Altered Expression of Glial Gap Junction Proteins Cx43, Cx30, and Cx47 in the 5XFAD Model of Alzheimer's Disease. *Front Neurosci*. 2020; 14: 582934.

g. Stavropoulos F, Georgiou E, Sargiannidou I, **Kleopa KA**. Dysregulation of Blood-Brain Barrier and Exacerbated Inflammatory Response in Cx47-Deficient Mice after Induction of EAE. Pharmaceuticals (Basel). 2021 Jun 28;14(7):621. doi: 10.3390/ph14070621.

4. My research has also contributed to the understanding of **autoimmune and paraneoplastic disorders presenting with neuromyotonia and encephalitis**, focusing on the common molecular mechanism of potassium channel dysfunction, either directly or indirectly through immune-mediated alterations of associated molecules. We have contributed to the identification of the antigenic targets and phenotypes involved. *Related publications*:

a. Kleopa KA, Elman L, Lang B, Vincent A, Scherer SS (2006). Neuromyotonia and limbic encephalitis sera target mature *Shaker*-type K+ channels: subunit specificity correlates with clinical manifestations. *Brain,* 129:1570-84.

b. Vincent A, Lang B, Kleopa KA (2006). Autoimmune channelopathies and related neurological disorders. *Neuron*, 52:123-138.

c. Irani SR, Alexander S, Waters P, Kleopa KA, Pettingill P, Zuliani L, Peles E, Buckley C, Lang B, Vincent A (2010) Antibodies to Kv1 potassium channel-complex proteins leucine-rich, glioma inactivated 1 protein and contactin-2-associated protein in

limbic encephalitis, Morvan's syndrome and acquired neuromyotonia. *Brain*, 133:2734-2748.

d. Irani SR,* Pettingill P,* Kleopa KA,* Schiza N, Waters P, Mazia C, Zuliani L, Watanabe O, Lang B, Buckley C, Vincent A (2012) Morvan's syndrome: clinical and serological observations in 29 cases. *Annals of Neurology*, 72:241-55 (*:*joint first authors*)

5. In addition, I have contributed to several research projects focusing on **diagnosis and treatment of neurological and especially neuromuscular disorders**, including myasthenia, ALS and peripheral neuropathies, as evident in my numerous peer-reviewed and highly cited publications (link above).

6. Participation in clinical Trials:

- As principal investigator: In Open Label Extension trial OLE ALN-TTR02-006 for familial amyloid neuropathy treatments (since Feb 2020).
- As sub-investigator/evaluator: In Phase 3 study ALN-TTRSC02-002 (since Sep. 2019) as well as in ION-682884-CS3 (since Feb. 2020)

RESEARCH GRANTS OBTAINED (selection)

2000-02 Advanced Postdoctoral Fellowship Award (FA 1393-A-1), National Multiple Sclerosis Society: Connexin32 mutations and central demyelination ($ 87,319)

2002-04 Advanced Postdoctoral Fellowship Award (FA 1393-A-1), National Multiple Sclerosis Society: Connexin32 mutations and central demyelination ($ 87,319)

2004-09 Research Grant (RG 3457A2/1) National Multiple Sclerosis Society "CNS connexins and demyelination in CMTX" ($ 219,750)-PI

2007-09 Research Grant of the Research Promotion Foundation: "Models of demyelinating neuropathy and encephalopathy" (90,000 CYP)-PI

2007-09 Bilateral Grant of the Research Promotion Foundation" Investigation of the molecular mechanisms of nervous system hyperexcitability in animal models" (CYP 10,350)-PI

2008-10 Research Grant of the Research Promotion Foundation: "The role of gap junctions in Multiple Sclerosis" (120,000 Euro)-PI

2010-12 Research Grant of the Research Promotion Foundation (Access to Infrastructure Grant): "Gap junction pathology in Multiple Sclerosis brain" (40,000 Euro)-PI

2010-12 Telethon Grant "Developing new treatments for CMT1X neuropathy" (100,000 Euro)-PI

2011-13 Research Grant of the Research Promotion Foundation: "Gene therapy for CMT1X inherited demyelinating neuropathy" (180,000 Euro)-PI

2011-16 Research Grant Award from the European Leukodystrophy Association (ELA) entitled “Gene therapy for hypomyelinating leukodystrophy” (194,000 Euro for 3 years)- PI

2013-15 Research Grant Award from the Muscular Dystrophy Association, USA (MDA) entitled “Mechanisms of CNS disease in X-linked Charcot-Marie-Tooth Disease” (100,200 US Dollars for Kleopa lab for 2 years)- co-PI

2013-16 Research Grant Award (277250) from the Muscular Dystrophy Association, USA (MDA) entitled “Developing Gene Therapy for Inherited Neuropathy” (280,945 US Dollars for 3 years)- PI

2013-17 Research Grant (RG 3457A2/1) National Multiple Sclerosis Society “Roles of Cx32 and Cx47 in oligodendrocytes” ($ 240,830 USD for Kleopa lab)-co-PI

2016-18 Research Grant from the Charcot-Marie-Tooth Association (CMTA) “Evaluating the outcome of a gene replacement approach in a model of CMT4C neuropathy” ($110,424 for 2 years)- PI

2016-18 Research Grant from the French Muscular Dystrophy Association-AFM - “A gene therapy approach for treating CMT4C neuropathy” (€110,000 for 2 years)-PI

2017-19 Research Grant Award (480030) from the Muscular Dystrophy Association, USA (MDA) – co-funded by the CMT Association- entitled “Expanding the gene therapy approach for treating CMT1X” ($120,000)- PI

2019-22 Research Grant Award (603003) co-funded by the from the Muscular Dystrophy Association, USA (MDA) –CMT Association- entitled “A translatable gene therapy approach to treat CMT1X” ($276,430)- PI

2019-21 Research Grant Award “Development of gene silencing approach to treat CMT1A” – CMT Research Foundation ($99,000, PI).

2019-20 Funding by the CyprusSeeds Program for innovation ($50,000) (PI)- Gene Therapy for Inherited Neuropathies

2019-21 Research Grant from the Charcot-Marie-Tooth Association (CMTA) “AAV mediated Gene Therapy for CMT4C” ($122,100 for 2 years)- PI

2020-22 Sponsored Research Agreement with Gene Therapy Company ($240,000) (PI), for translating gene therapy for CMT1X

2020-21 Funding by Association Piccolo Grande Guerriero Odv Italy- Research Project Gene therapy for HLD2 leukodystropy (€52,360) – PI

2021-22 Sponsored Research Agreement with Gene Therapy Company ($97,000) (PI)- for translating gene therapy for CMT4C

2021-23 Research Grant from the Charcot-Marie-Tooth Association (CMTA) “Schwann cell-targeted gene therapy approaches to treat CMT1A and other demyelinating neuropathies” ($38,500 for 18 months)- PI

Invited lectures and presentations (selected from over 50 invited lectures)

2001 Department of Neurology Grant Rounds, University of Pennsylvania: "Genetic disorders of neuromuscular ion channels"

2001 University of Medicine and Dentistry of New Jersey, Neuroscience Grand Rounds: "Inherited neuropathies: clinical aspects and molecular genetics"

2002 Howard Hughes Medical Institute, Duke University Medical Center, NC: "The molecular base of channelopathies affecting nerve and muscle"

2004 2nd Mediterranean Congress of Neurology, Nicosia, Cyprus: "Recent advances and future directions in the treatment of Charcot-Marie-Tooth neuropathies"

2005 University of Oxford, UK, Institute of Molecular Medicine: "Neuromyotonia sera colocalize with voltage-gated potassium channels in myelinated axons"

2005 Drexel University College of Medicine, Philadelphia, PA, Department of Neurology Grand Rounds: "Inherited Neuropathies: Advances in Genetics and Neurobiology"

2006 University of Crete Medical School, Institute of Molecular Biology and Biotechnology (IMBB): "Neurological disorders of hyperexcitability: the role of potassium channels"

2007 14th Tel Aviv University Alzheimer Conference: "Limbic encephalitis: autoimmune mechanisms and clinical phenotypes"

2007 **European Society for Neurochemistry (ESN) Annual Meeting**: Gap junctions in myelinating cells" May 2007, Salamanca, Spain

2008 **Gordon Research Conference on Myelin, Invited Speaker**: "CNS demyelination in CMT1X patients and in gap junction mutant mice" Il Ciocco, Italy, May 2008

2008 Greek Clinical Neurophysiology Society Annual Meeting: "Evaluation of Nerve damage in the shoulder region", Thessaloniki, Greece, December 2008

2009 **Mediterranean Society of Myology Meeting**: "The effects of CMT1X mutations in myelinating cells". March 2009, Nicosia, Cyprus

2010 Cyprus Neurological Society Annual Meeting, Nicosia: "Myasthenia gravis: Diagnosis and Treatment".

2010 Greek Clinical Neurophysiology Society Annual Meeting: "Diagnostic approach of myopathy with electromyography", Ioannina, Greece, December 2010

2011 1st National Scientific Conference for Rare Disorders, Nicosia: "Diagnostic and therapeutic approach to myasthenia gravis"

5/2012 Eighth Aegean Meeting on Neurological Therapeutics, Heraklion, Crete: "Alterations of glial gap junctions in MS brain and in the EAE model"

11/2012 **XII NeuroMediterranean Congress**, Nicosia, Cyprus: "Paraneoplastic and non-paraneoplastic disorders of the voltage-gated potassium channel complex"

11/2012 3rd International Conference of the Cyprus Society of Human Genetics, Nicosia: "Gene therapy for inherited neuropathy and leukodystrophy"

11/2012 10th World Hellenic Biomedical Congress, University of Nicosia: "Inherited demyelinating disorders of the nervous system"

3/2013 Laboratory of Experimental Neurology and Neuroimmunology, Department of Neurology, Aristotle University of Thessaloniki, Greece, seminar: Emerging roles of glial gap junctions in MS and EAE pathology"

8/2013 Connexin pathology in chronic MS and EAE. **Plenary speaker, 12th MS Workshop** organized by the **Japanese Society of Neuroimmunology** in Fukuoka, Japan

8/2013 Morvan's syndrome and autoimmunity to the voltage-gated potassium channel complex. Seminar for the Department of Neurology, Neurological Institute, Kyushu University, Fukuoka, Japan

10/2013 Alterations of glial gap junctions in MS and EAE: a new link between inflammation and neurodegeneration. Hellenic Academy of Neuroimmunology Meeting, Athens

11/2013 The role of gap junctions in inherited and acquired demyelination. 26th Hellenic Neuroscience Society Meeting, Athens

9/2016 **International Society for Neuroimmunology Annual Meeting**, Jerusalem, Israel. Invited talk: "Involvement of gap junction channels in neuroinflammation"

10/2016 Center for Applied Neurosciences 6th Annual Conference, Univ. of Cyprus: "Insights into molecular mechanisms of neurological disorders using models of neuroinflammation"

10/2016 5rd International Conference of the Cyprus Society of Human Genetics, Nicosia. Invited talk: "Gene Therapy of X-linked Charcot Marie Tooth Disease by Gene Addition"

11/2016 Hellenic Association of Medical Geneticists Meeting, Athens, Greece. Invited talk: "Development of gene therapy for demyelinating neuropathies"

3/2017 "Insights into molecular mechanisms of multiple sclerosis using models of neuroinflammation". Invited Seminar Talk, University of Nicosia, Nicosia.

7/2017 ***Invited Plenary Speaker*, Peripheral Nerve Society Annual Meeting**. Sitges, Spain: "Intrathecal gene delivery of GJB1 in animal models of CMT1X".

3/2018 ***Gordon Research Conference on Myelin, Invited Speaker**: Gene therapy approaches targeting myelinating cells, Ventura, California*.

5/2018 Invited Speaker, Clinical Neuroimmunology Meeting, Attica Neurological Sciences Institute: "The role of gap junctions in the Nervous system and demyelinating disorders", Athens, Greece

7/2018 **Invited Speaker, CMT Association (USA) workshop on Gene Therapy for CMT**: Opportunities and Challenges. "Targeted Schwann cells to treat CMT1X and CMT4C". Baltimore, USA

11/2018 Invited Speaker, Annual Meeting of the Medical Geneticists Association of Greece: "New developments in gene therapy for neurological diseases". Athens, Greece

12/2018 Cyprus Society of Human Genetics Annual Meeting, Nicosia. Invited talk: "Gene addition or silencing approaches to treat inherited neuropathies"

2/2019 Invited Speaker, 5th symposium Current Topics in Myelin Research, Bad Wilhelmshöhe, Kassel, Germany

5/2019 Invited Speaker, CMT Association (USA) Scientific Advisory Board Meeting "Gene therapy for demyelinating CMT", and "Neurofilament light levels in models of CMT neuropathies", Philadelphia, USA

10/2019 "The role of gap junctions in inherited and acquired demyelination". Invited Symposium Speaker, 28th Meeting of the Hellenic Neuroscience Society, Heraklion

11/2019 Invited Speaker, "Gene therapy applications for inherited demyelinating neuropathies", Neuropathology and Neurogenetics Conference, Polish Academy of Sciences, Warsaw, Poland.

3/2020 ***Invited Plenary Speaker*****,** Netherlands Society for Cell and Gene Therapy Annual Meeting, Lunteren, Netherlands (*Meeting cancelled due to pandemic*)

4/2020 ***Invited Plenary Speaker*****,** UK Neuromuscular Translational Research Conference, UCL-GOSH, London, UK (*Meeting cancelled due to pandemic*)

5/2021 ***Invited Speaker,*** University of Athens, Department of Neurology grand rounds: Gene therapies for inherited neuropathies

6/2021 ***Invited Speaker***, CMT Association (USA) Scientific Advisory Board Meeting "Gene Therapy for CMT1A, CMT1X and CMT4C, Current Status", virtual meeting.

10/2021 ***Invited Speaker, 2021 World Congress of Neurology,*** *Rome, Italy (virtual):* Developing gene therapies for inherited demyelinating neuropathies.

9/2021 ***Invited plenary speaker and symposium organizer,*** *CMT Research Foundation 2021 Global Research Convention (virtual)*

11/2021 Invited Speaker, Annual Meeting of the Medical Geneticists Association of Greece: "Towards a translation of gene therapies for demyelinating neuropathies".

5/2022 ***Invited plenary P.K. Thomas lecturer***. 2022 Peripheral Nerve Society Annual Meeting. Miami, USA (*planned*)