

**GEORGE LEONDARITIS CV**  
**Assistant Professor of Pharmacology, University of Ioannina**

**PERSONAL INFORMATION**

Last name : LEONDARITIS  
First name : GEORGE  
Year of Birth : 1971  
Place of Birth : Athens, Greece  
Military Service : 2000-2001, Supply and Transport Branch, Greek Army  
Address (home) : Despotatou Ipirou 18, 453 33 Ioannina, Greece  
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**EDUCATION**

1998–2003 Ph.D. in Biochemistry. Department of Chemistry, University of Athens, Athens, Greece.  
1996–1998 M.Sc. in Biochemistry. Department of Chemistry, University of Athens, Athens, Greece  
1989–1995 B.Sc. in Chemistry. Department of Chemistry, University of Athens, Athens, Greece  
Grade “Very Good”

**RESEARCH AND PROFESSIONAL EXPERIENCE**

Jan 2018 - Assistant Professor, Department of Pharmacology, Medical School, University of Ioannina, Ioannina, Greece  
2015/2016 Visiting Guest Scientist, Institute of Biochemistry/Neurocure Cluster of Excellence, Charite-Universitätsmedizin Berlin, Germany  
2014 - 2017 Lecturer, Department of Pharmacology, Medical School, University of Ioannina, Ioannina, Greece  
2012-2014 Research Associate, MRC Centre for Developmental Neurobiology, King's College London, London, UK and Guest Scientist, Institute of Biochemistry/Neurocure Cluster of Excellence, Charite-Universitätsmedizin Berlin, Berlin, Germany. BBSRC-funded project: “*Approaches to study protein complexes and signalling during circuit formation using ES cell-derived neurons*”  
2007-2011 Research and Teaching Associate (adjunct lecturer PD407/80), Department of Pharmacology, Medical School, University of Thessaly, Larissa, Greece. Member of the Clinical Pharmacology Laboratory of the University Hospital, training and experience in TDM (therapeutic drug monitoring) (2007-2010)  
2004-2008 Post-doctoral fellow, Laboratory of Developmental Neurobiology and Neurochemistry, Division of Neurosciences, Biomedical Research Foundation of the Academy of Athens (BRFAA), Athens, Greece. Project: “*Regulation of activity and localization of the tumor suppressor RasGAP neurofibromin and impact on growth-factor-induced Ras/ERK signaling*”.  
2003-2004 Research Associate, PENED Program (PENED 2001, number 01EΔ337). Project: “*Phosphatidylinositol in bronchoalveolar lavage fluid and hydrolysis by phospholipase C*”.  
07-09/1999 Visiting scientist, Laboratory of Inositide Signaling, Department of Biochemistry, University of Dundee, Dundee, UK. Project: “*Substrate specificity of the protein and phosphoinositide phosphatase PTEN*”.

**Distinctions/Awards/Fellowships**

May 2018 Member of the Organizing Committee, 10th Conference of the Hellenic Society of Basic and Clinical Pharmacology, Ioannina, Greece  
September 2015 Academic fellow of the Hellenic Ministry of Education in the Greek-German Academic Exchange Program  
2012-2015 Member of the Management Committee (MC) of COST Action BM1102 (Domain: Biomedicine and Molecular Biosciences, BMBS): “*Ciliates as model systems to study genome evolution, mechanisms of non-Mendelian inheritance, and their roles in environmental adaptation*”

- 2012 - Reviewer of research papers for the scientific journals: Journal of Neurochemistry, PloS ONE, Neurochemistry International
- 2011 Invited Guest Editor of the Journal of Lipids special issue "Lipids and Lipoproteins in Atherosclerosis". Editorial: *J Lipids*. 2011;2011:160104. doi: 10.1155/2011/160104.
- 2007 Young Investigator Travel Award, International Society of Neurochemistry, 21st International /American Society of Neurochemistry-ISON/ASN Meeting (20-26 August, Cancun, Mexico)
- 1999 Fellowship from the MRC Protein Phosphorylation Unit, Department of Biochemistry, University of Dundee, for research in the Laboratory of Inositide Signaling, Department of Biochemistry, University of Dundee (July-September, Dundee, UK)

### Research Programs / Funding

- 2016-2020 CRC/TRR 186 DFG-funded network (DFG, Deutsche Forschungsgemeinschaft), Germany. Title of the Network: "Molecular switches in the spatio-temporal control of cellular signal transmission". Title of the proposal (Project No. 10): "Switching plasma membrane phosphoinositide compositions in neurons: Implications for membrane dynamics, axonal morphogenesis and the cortical actin cytoskeleton". Participation in conception, drafting, planning, writing and defence of the proposal in collaboration with Prof. B.J. Eickholt (Charite-Universitätsmedizin Berlin). Budget: 650,000 euro (for 4 years).
- 2018-2021 IPIROS 2014-2020, «Development of an interactive electronic database on medicinal plants – Preclinical and clinical investigation of the potential beneficial effect of herbs on mild mental disorder and Alzheimer's disease» Principal Investigator: Professor M. Konstandi, Laboratory of Pharmacology, Department of Medicine, University of Ioannina. Budget: 299,378 euro (for 3 years). (Role: Investigation on cellular models)
- 2013 Neurocare Innovation Project, funded by Neurocare and Charite-Universitätsmedizin Berlin. Title of the project: "Development of a method for quantitative analysis of PI3K pathway activation in neurodevelopment and brain pathology", in collaboration with Prof. B.J. Eickholt. Budget: 25,000 euro (for 1 year).

### Invited Speaker in Conferences/Scientific Seminars

- 2017 Invited Speaker, 68th EEBMB Conference, Athens, Greece. Talk: "PI3K/PTEN signalling in space and time: implications for neuronal morphogenesis"
- 2016 ME-HaD (COST Action BM1202) Training Course on Extracellular Vesicles, March 1-3rd, Ioannina, Greece. Talk: "Regulation of phosphoinositide signaling by exosomes: the example of the tumor suppressor PTEN"
- 2013 Seminar Program of the Department of Chemistry, University of Athens, Athens, Greece. Talk: "Lipid phosphatases and neuronal differentiation: the role of the tumor suppressor PTEN"
- 2012 COST Action BM1102 Annual Scientific Meeting, 7-9th November, Paris, France. Talk: "The phosphoinositide kinome of ciliates: implications for cell polarity and ciliary functions"
- 2009 23rd Conference of the Hellenic Society of Neurosciences, Rhodes, Greece. Talk: "Spatiotemporal regulation of Ras/ERK intracellular signaling during neuronal differentiation: dissecting the role of the RasGAP neurofibromin"

### MENTORING/TEACHING EXPERIENCE

#### Supervising/mentoring experience

- 2019- Supervision of a PhD project "Role of Lipid Phosphate Phosphatase-Related (LPPR) proteins in extracellular lipid agonist signaling in the nervous system" (A. Polyzou, Laboratory of Pharmacology, Medical School, University of Ioannina)
- 2018- Supervision of a MSc thesis: "Axonal regeneration mechanisms in the CNS after spinal cord injury" (E. Papanikolaou, Laboratory of Pharmacology, Medical School, University of Ioannina)
- 2015-2018 Supervision of 2 MSc thesis: "PI3K/Akt pathway and schizophrenia" (C. Tagas, 2018) and "Novel insulin-based drugs in the treatment of diabetes". (D. Siola, 2017)
- 2015-2018 Supervision of 2 graduate projects: "Study of the role of PI3K/Akt/PTEN signaling pathway in neuronal development and plasticity" (A. Polyzou, Department of Biological Applications and Technology, University of Ioannina, 2017) and "Pharmacological characterization of 1<sup>st</sup> generation PTEN inhibitors" (G. Aggelis, Department of Biological Applications and Technology, University of Ioannina, 2018)
- 2012-2015 Co-supervision of two PhD theses "Specificity of developmental- and growth factor-dependent

*phosphorylation of Akt isoforms in a neuronal background*" (S. Schrötter, Charité - Universitätsmedizin Berlin, 2016) and "*Regulation of neuronal PTEN by members of the plasticity-related gene family during development*" (A. Brosig, Charité - Universitätsmedizin Berlin, 2018). In collaboration with Prof. B. J. Eickholt, Berlin, Germany.

2001-2011 Co-supervision of 5 MSc theses and 3 graduate projects (University of Athens, Department of Chemistry; Laboratory of Developmental Neurobiology and Neurochemistry, Division of Neurosciences, FBRAA Athens; Laboratory of Pharmacology, Medical School, Larissa)

#### Undergraduate/Postgraduate

2007- Teaching of selected topics in "Pharmacology I", "Pharmacology II" courses (5th and 6th semester, respectively), Medical School, University of Ioannina and Medical School, University of Thessaly, Larissa

2015- Postgraduate Programs of "Basic Biomedical Sciences" (Molecular and Applied Pharmacology) and "Medicinal Chemistry", University of Ioannina.

#### Invited speaker in international postgraduate programs

2017- International Graduate Program in "Neurosciences", University of Athens, Greece. Topic: "*Phosphoinositides in the nervous system*" in 1st semester Course "Cellular and Molecular Neuroscience"

2013-2014 International Graduate Program "Medical Neurosciences", Charité - Universitätsmedizin Berlin, Berlin, Germany. Topic: "*Signaling and Disease Mechanisms in Brain Development*" in Module 4 "Neuropathophysiology". (Top-scoring evaluation from students in 2014)

#### MEMBER OF SCIENTIFIC SOCIETIES

Association of Greek Chemists (1996-); Hellenic Society of Biochemistry and Molecular Biology (HSBMB/FEBS) (1996-); International Society of Neurochemistry (ISN) (2007-); Greek Lipid Forum (2006-); Hellenic Society of Pharmacology and Clinical Pharmacology (2009-)

#### PUBLICATIONS

##### Publications in Scientific Journals

(including peer-reviewed commentaries/review articles/book chapters)

1. Adolf, A., **Leondaritis**, G., Rohrbeck, A., Eickholt, B. J., Just, I., Ahnert-Hilger, G. and Höltje, M. (2016) The intermediate filament protein vimentin is essential for axonotrophic effects of Clostridium botulinum C3 exoenzyme. *J. Neurochem.*, (Jul 15. doi: 10.1111/jnc.13739).
2. Schrötter, S., **Leondaritis**,\* G. and Eickholt, B. J. (2016) Capillary isoelectric focusing of Akt isoforms identifies highly dynamic phosphorylation in neuronal cells and brain tissue. *J. Biol. Chem.*, **291**, 10239-10251.\*equal contribution author
3. **Leondaritis**, G. and Eickholt, B.J. (2015) Short lives with long-lasting effects: Filopodia protrusions in neuronal branching morphogenesis. *PLoS Biol.*, **13**(9):e1002241. (invited commentary/primer)
4. Pikiou, O., Vasilaki, A., **Leondaritis**, G., Vamvakopoulos, N. and Messinis, I.E. (2015) Effects of metformin on fertilisation of bovine oocytes and early embryo development: possible involvement of AMPK-mediated TSC2 activation. *Zygote*,**23**, 58-67.
5. Papoutsoglou, S.E., Karakatsouli, N., Psarrou, A., Apostolidou, S., Papoutsoglou, E.S., Batzina, A., **Leondaritis**, G. and Sakellaridis, N. (2015) Gilthead seabream (*Sparus aurata*) response to three music stimuli (Mozart-"Eine Kleine Nachtmusik," Anonymous-"Romanza," Bach-"Violin Concerto No. 1") and white noise under recirculating water conditions. *Fish Physiol. Biochem.*,**41**, 219-232.
6. Kreis, P., **Leondaritis**, \* G., Lieberam, I. and Eickholt, B.J. (2014) Subcellular targeting and dynamic regulation of PTEN: implications for neuronal cells and neurological disorders. *Front. Mol. Neurosci.*,**7**, 23. (review article) \*equal contribution author
7. **Leondaritis**, \* G., Siokos, J., Skaripa, I. and Galanopoulou, D. (2013) Genome-wide analysis of the phosphoinositide kinome from two ciliates reveals novel evolutionary links for phosphoinositide kinases in eukaryotic cells. *PLoS One* **8**(11), e78848. \*corresponding author
8. Zisopoulou, S., Asimaki, O., **Leondaritis**, G., Vasilaki, A., Sakellaridis, N., Pitsikas, N. and Mangoura, D. (2013) PKC-epsilon activation is required for recognition memory in the rat. *Behav. Brain Res.*,**15**, 280-289

9. Papoutsoglou, S.E., Karakatsouli, N., Skouradakis, C., Papoutsoglou, E.S., Batzina, A., **Leondaritis**, G. and Sakellaridis, N. (2013) Effect of musical stimuli and white noise on rainbow trout (*Oncorhynchus mykiss*) growth and physiology in recirculating water conditions. *Aquacultural Engineering*, **55**, 16-22.
10. Karakatsouli, N., Katsakoulis, P., **Leondaritis**, G., Kalogiannis, D., Papoutsoglou, S.E., Chadio, S. and Sakellaridis, N. (2012) Acute stress response of European sea bass *Dicentrarchus labrax* under blue and white light. *Aquaculture*, **364-365**, 48-52.
11. **Leondaritis**, \* G., Koliou, X., Johnson, S., Li, S., Florakis, A., Dimas, K., Sakellaridis, N. and Mangoura D. (2012) Interplay between protein kinase C isoforms alpha and epsilon, neurofibromin, and the Ras/MAPK pathway in neuroblastoma differentiation. In “Neuroblastoma – Present and Future” (Shimada, H., ed.) InTech Open Access Publisher, pp. 85-110. (invited book chapter) \*equal corresponding author
12. **Leondaritis**, G. and Galanopoulou, D. (2011) Emerging roles of phosphoinositide-specific phospholipases C in the ciliates *Tetrahymena* and *Paramecium*. *Commun. Integr. Biol.*, **4**(5), 576-578. (invited article addendum)
13. Asimaki, O., **Leondaritis**, \* G., Lois, I., Sakellaridis, N. and Mangoura, D. (2011) Cannabinoid 1 receptor-dependent transactivation of fibroblast growth factor receptor 1 emanates from lipid rafts and amplifies extracellular signal regulated kinase 1/2 activation in embryonic cortical neurons. *J. Neurochem.*, **116**, 866-873. \*equal contribution author
14. **Leondaritis**, G., Sarri, Th., Dafnis, I., Efstathiou, A. and Galanopoulou, D. (2011) Biochemical and genetic evidence for multiple phosphatidylinositol- and phosphatidylinositol 4,5-bisphosphate-specific phospholipases C in *Tetrahymena*. *Eukaryot. Cell*, **10**, 412-422.
15. Spyridakis, S., **Leondaritis** G., Nakos, G., Lekka, M. and Galanopoulou, D. (2010) A specific PLC activity regulates phosphatidylinositol levels in lung surfactant of ARDS patients. *Am. J. Respir. Cell Mol. Biol.*, **42**, 357-362.
16. **Leondaritis**, G., Petrikos, L. and Mangoura D. (2009) Regulation of the Ras GTPase-activating protein neurofibromin by C-tail phosphorylation; implications for protein kinase C/Ras/extracellular signal-regulated kinases 1/2 pathway signaling and neuronal differentiation. *J. Neurochem.*, **109**, 573-583.
17. Theofilopoulos, S., Lykidis, A., **Leondaritis**, G. and Mangoura, D. (2008) Differential function of two novel human type-2 phosphatidate phosphatase family genes in *de-novo* triacylglyceride and phospholipids biosynthesis. *Biochim Biophys Acta-Mol. Cell Biol. L.*, **1781**, 731-742.
18. Deli D., **Leondaritis**,\* G., Tiedtke, A. and Galanopoulou, D. (2008) Deficiency in lysosomal enzyme secretion is associated with upregulation of phosphatidylinositol 4-phosphate in *Tetrahymena*. *J. Eukaryot. Microbiol.*, **55**, 343-350. \*equal contribution author
19. Gountopoulou, A., **Leondaritis**, G., Galanopoulou, D. and Mavri-Vavayianni, M. (2008) TNF $\alpha$  is potent inducer of PAF synthesis in adipocytes but not preadipocytes. Differential regulation by PI3K. *Cytokine*, **41**, 174-181.
20. **Leondaritis**, G., Tiedtke, A. and Galanopoulou, D. (2005) D-3 phosphoinositides of the ciliate *Tetrahymena*: characterization and study of their regulatory role in lysosomal enzyme secretion. *Biochim Biophys Acta-Mol. Cell Res.*, **1745**, 330-341.
21. **Leondaritis**, G. and Galanopoulou, D. (2000) Characterization of inositol phospholipids and identification of a mastoparan-induced phosphoinositide response in the ciliated protozoan *Tetrahymena pyriformis*. *Lipids*, **35**, 525-532.
22. **Leondaritis**, G., Kapetaniou, V. and Galanopoulou, D. (2000) Study of phosphatidylinositol hydrolyzing activities in a unicellular eukaryote. In “*Lipases and Lipids. Structure, function and biotechnological applications*” (Kokotos, G. and Constantinou-Kokotou, V., eds.) Crete University Press, pp. 265-276.

#### Chapters in Academic University Books

1. “Biochemical Pharmacology and Mechanisms of Drug Action” Hellenic Academic E-books, Project Kallipos, 2015, Chapters 5 and 6
2. “Biological Membranes: From structure to function” Hellenic Academic E-books, Project Kallipos, 2015 Chapters A6 and B7-B9

**Recent selected presentations in national and international conferences (from a total over 40)**

1. G. Aggelis, M. Papanikolaou, C. Andriopoulou, B.J Eickholt, M. Konstandi, T.A. Kabanos, G. **Leondaritis** (2018) A critical re-evaluation of first-generation vanadium-based PTEN inhibitors in vivo. Abstracts of the 10th HSBCP Conference, 25-27 May, Ioannina.
2. Polyzou, A., Schroetter, S., Delis, F., Poulia, N., Antoniou, K., Eickholt, B.J. and **Leondaritis**, G (2017) Regulation of PDK1-dependent phosphorylation of Akt and PKC kinases during brain development. Abstracts of the 68th EEBMB Congress, P158
3. Gkogkou, K., Polyzou, A., Eickholt, B.J., Xenos, M. and **Leondaritis** G. (2016) Mathematical modeling of axonal shaft filopodia dynamics during growth of embryonic stem cell-derived motor neurons in culture. Abstracts of the 67th EEBMB Congress, P206
4. Brosig, A., Schrötter, S., **Leondaritis**, G. and Eickholt B.J. (2015) Identification of transmembrane pseudophosphatase Plasticity related gene 2 as an interacting partner of PTEN. FEBS J. 282 (suppl.1), 172 (40th FEBS Congress, Berlin, Germany)
5. **Leondaritis**, G. and Galanopoulou, D. (2015) Network analysis of phosphoinositide kinases and phosphatases in Tetrahymena. (Abstracts of the Ciliate Molecular Biology Meeting, 10-16th July, Camerino, Italy)
6. **Leondaritis**, G., Brosig, A., Lieberam, I. and Eickholt, B.J. (2014) Regulation of PTEN by transmembrane lipid pseudophosphatases of the plasticity-related gene family and implications for neuronal growth. (Abstracts of the 5th Cold Spring Harbor Laboratory conference on “PTEN pathways and Targets“, 25-28th March, Cold Spring Harbor, USA)
7. Schroetter, S., **Leondaritis**, G. and Eickholt, B.J. (2014) Analysis of PI3K/PTEN-Akt signaling in cortical neurons through capillary-based isoelectric focusing (cIEF). (Abstracts of the 9th FENS Forum of Neurosciences, p. 293, 5-9th July, Milan, Italy)
8. **Leondaritis**, G. and Mangoura, D. (2010). Regulation of neurofibromin’s GAP-related domain RasGAP activity by a Sec14-homology domain-dependent allosteric switch (61st Conference of the Hellenic Society of Biochemistry and Molecular Biology, Aleksandroupoli, Greece)
9. Karouzaki, S., **Leondaritis**, G., Tompa, R. and Mangoura, D. (2008) Src regulates EGF-dependent spatiotemporal activation of cRaf, MEK1 and ERK and cell differentiation. (22<sup>nd</sup> Conference of the Hellenic Society of Neurosciences, Athens, Greece)
10. **Leondaritis**, G., Karouzaki, S. and Mangoura, D. (2006) Membrane lipid and protein functional binding of the SEC14 domain and subcellular targeting of neurofibromin. Proceedings of the Children's Tumour Foundation International Neurofibromatosis Consortium, Aspen, CO, USA, p.81