

## CURRICULUM VITAE

### Personal Data

Family Name: Psarra  
First name: Anna-Maria  
Date of birth: 29/5/1968  
Place of birth: Chios-Greece  
Nationality: Greek  
Telephone: +30-2410-565221  
Email: [ampsarra@bio.uth.gr](mailto:ampsarra@bio.uth.gr)

### Studies

October 1998: PhD, Kapodistrian University of Athens. Department of Biology.  
1992-1997: PhD student National Hellenic Research Foundation (NHRF). Institute of Biological Research and Biotechnology.  
1991: Diploma in Chemistry.  
1986- 1991 BSc in Chemistry, Kapodistrian University of Athens

### Research and positions held

May 2017-today Assistant Professor, Biochemistry, University of Thessaly, Department of Biochemistry & Biotechnology (DBB) (Permanent position)  
Oct. 2012-April 2017 Assistant Professor, Biochemistry, University of Thessaly, Department of Biochemistry & Biotechnology  
Oct. 2009-Oct 2012 Lecturer, Biochemistry, University of Thessaly, Department of Biochemistry & Biotechnology.  
Oct. 2002-Sept. 2009 Investigator D, IIBEAA, Academy of Athens, Basic Research Centre, Laboratory of Cellular and Molecular Biology.  
Mar.2004-Apr.2004 Contract Researcher, Department of Molecular Pharmacology and Toxicology, School of Pharmacy, University of Southern California, Los Angeles, CA, USA  
Nov. 2002-Mar. 2003 Contract Researcher. Department of Biosciences at Novum, Center for Biotechnology, Karolinska Institute, Sweden  
Jan. 2001- Sep.2002 Contract Researcher, Department of Pathophysiology, Medical School, University of Athens, Greece  
2000: Contract Researcher, Departments of Physiology and Pathology, Medical School, University of Geneva, Switzerland,  
1997-1999: Post-graduate fellow in the Department of Biological Chemistry, School of Medicine, University of Athens,  
Jun.-Aug. 1996: Part of research, leading to a PhD degree, with a fellowship from FEBS, in the Institute of Chemistry and Physiology at the University of Tübingen.

### Research interest

- Steroid receptors mechanisms of actions
- Mitochondrial steroid receptors
- Mechanisms of mitochondria – nuclear communication
- Characterization of selective glucocorticoid receptor activators-Mechanisms of action
- Characterization of selective estrogen receptor activators-Mechanisms of action
- Evaluation of the biological activity of plant derived and chemical modified compounds

## Teaching Activities

2014-	University of Thessaly, DBB. Undergraduate courses: Structure and analysis of biomolecules, Metabolic Regulation, Metabolism, Analytical Biochemistry
2009-2014	University of Thessaly, DBB. Undergraduate courses: Biochemistry I, Biochemistry II, Metabolic Regulation, Analytical Biochemistry
May 2017	University of Thessaly, Faculty of Medicine, Post graduate program “Human genetics” Lecture: Mitochondrial metabolism in Health and disease
2010-	University of Thessaly, DBB. Participation in Postgraduate courses of the following postgraduate programs: “Biotechnology-Nutrition & Environment”, “Applications of Molecular Biology-Genetics”, “Bioepixirin”, “Advanced experimental and computational Biosciences”,
Feb. 2007	Teaching at post graduate courses organized by the Medical School, University of Athens. Lecture: Mitochondria. Dynamic Organelles in Development Aging and Disease.
Oct. & Jan.2006	Teaching at post graduate courses organized by the Medical School, University of Athens. Lecture: Expression of recombinant DNA in prokaryotic and eukaryotic cells.
April 2005	Teaching at post graduate courses organized by the University of Thessalias. Lecture: Confocal Microscopy: Principle of the method – Applications
Oct. 2001-Feb.2002:	Teaching of Physiology I, Department of Dietology and Nutrition, Harokopeio University, Athens.

**Languages:** English (Proficiency)

## Fellowships

Jun. 2000:	Short Term Fellowship, European Neuroscience Network (ENN)
2000:	Long Term Fellowship, National Swiss Research Foundation
1992-1997:	Predoctoral Fellowship from the National Hellenic Research Foundation (NHRF)
1996:	Short Term Fellowship, Federation of European Biochemical Societies (FEBS)
1987:	Fellowship from the National Scholarships Foundation of Greece (I.K.Y).
1986:	Fellowship from the John D. Pateras Foundation

## Awards

- Bodossaki Foundation donation: Fluorescence camera (11.000 euro), Protocol number 1669/1127/εδ. 23/12//2013.
- Basic research award in endocrinology. 43<sup>rd</sup> Hellenic Conference of Endocrinology Metabolism and Diabetes Melitus 20-23 April 2016, Athens. Nicolaidis NC, Geer EB, Vlachakis D, Roberts ML, **Psarra AM**, Moutsatsou P, Sertedaki A, Kossida S, Charmandari E. A Novel Mutation of the hGR Gene Causing Chrousos Syndrome.
- Basic research award in endocrinology. 44<sup>th</sup> Hellenic Conference of Endocrinology Metabolism and Diabetes Melitus 26-29 April 2017, Athens. Nicolaidis NC, Skyrla E,

Vlachakis D, **Psarra AMG**, Moutsatsou P, Sertedaki A, Kossida S, Charmandari E.  
Functional characterization of the hGR $\alpha$ T556I causing Chrousos syndrome.

### Scientific Activities

- Member of the Hellenic Union of Chemists
- Member of the Hellenic Society of Biochemistry and Molecular Biology
- Member of the Society of Free Radical Research

### Thesis supervision

4 PhD thesis projects; 19 Diploma projects; 15 MSc thesis projects; Member of the advisory committee of 7 PhD students; Member of the examination committee of 2 PhD students; Co-supervision of more than 30 Diploma projects; Co-supervision of more than 15 MSc thesis projects

### Participation in Research Projects

**H.F.R.I** (Hellenic Foundation for Research and Innovation)\_**2246**: Fellowship to PhD candidate Aikaterini Karra. Biochemical characterization of glucocorticoid receptor mechanisms of action. Plant steroids and their derivatives as putative selective glucocorticoids agonists. Role: Principal Investigator

**H.F.R.I\_1434** : Fellowship to PhD candidate Ioannis Tsialtas. Characterization of the biochemical mechanisms of actions of estrogen receptors. Role: Principal Investigator

**H.F.R.I\_466**: Fellowship to PhD candidate Foteini Kalousi. Assessment of the biological activities of natural products. Role: Principal Investigator

**EII ANAA-EAMB 2019\_(GLYDESIGN)** Structural based design of potent regulators of glucogenolysis for novel drugs development. Role: Associate Principal Investigator

**EPAnEK\_T1EDK-02787**: Men fertility: genomics, proteomics and diagnosis. From the bench to the Bedside. . Role: member of the research team.

**FP7**: “Cooperation A pipeline for the discovery, sustainable production and commercial utilisation of known and novel high-value triterpenes with new or superior biological activities” FP7-KBBE-2013-7-single-stage. Role: member of the research team.

**Excellence 2012: DESYNE**: “Structure-assisted Design, Synthesis, and Evaluation of Bioactive compounds for type 2 Diabetes mellitus”. 2012-2015. Role: member of the research team.

**Archmedes III: APPH**: “Anti-Respiratory Products and Health”. March 2012-February 2015. Role: Partner.

**Thalis: GLUCOCORT**: “Molecular Mechanisms and Clinical Implications of Glucocorticoid Receptor Action”. 2012-2015. Role: member of the research team.

**Thalis: Feredox**: “Investigation of the role of iron in the mechanisms of intracellular redox signaling through oxidation of cysteine residues in proteins”.2012-2015. Role: member of the research team.

**Research committee of the University of Thessaly**. Research Project Code: 3439. 2010-2012. Role: Coordinator.

**General secretary research and technology IIABET-NE 04BEN4**: “Targeting new pharmaceutical products based on liposomes and dendrimers. 2004-2007. Role: member of the research team.

### Invited speaker

**Euro Conference “Müller Cells – Research Progress since 150 Years”** August 30-September 2, 2001, Leipzig, Germany. “Exploring the molecular mechanism of the effects of glucocorticoids in cellular metabolism and function of Müller cells”.

**Conference of Hellenic society of Biochemistry and Molecular Biology**, 5<sup>th</sup> May 2017, Larissa: “Steroid hormone receptors. New mechanisms of actions and therapeutic approaches”

**Post graduate program “Human genetics”** 29 May 2017 University of Thessaly, Faculty of Medicine, Lecture: Mitochondrial metabolism in Health and disease

### **Journal Reviewer**

Neuroscience, Journal of Neuroscience Research, International Journal of Biochemistry and Cell Biology, PLOS ONE, Molecular cellular endocrinology, Cells, Molecules, Future Oncology, Journal of Liver, Toxins, Nutrients, DNA and Cell Biology, International Journal of Environmental Research and Public Health, Journal of clinical medicine, Central European Journal of Immunology, International Journal of Molecular Science

### **Current management activities**

2018-today	Member of the steering committee of the Postgraduate Program of the Postgraduate Program “Bioepixirein” Department of Biochemistry & Biotechnology Μέλος (DBB) –National Hellenic Research Foundation
2017	Member of the organizing committee of the 69th congress of the Hellenic Society of Biochemistry and Molecular Biology
March. 2015-2018	Member of the organizing committee of the Postgraduate Program “Bioepixirein” Department of Biochemistry & Biotechnology (DBB) – National Hellenic Research Foundation
2015	Member of the supervision committee of the Vocational training
Sept. 2014-today	Member of the steering committee of the Postgraduate Program "Applications of Molecular Biology Molecular Genetic - Diagnostic Indicators, DBB
2013-today	Member of the Equipment and Infrastructure Committee, DBB
2016-today	Member of the Committee for the Promotion of the Department and links with the Society, DBB
2009-today	Member of the General Assembly Committee, DBB

### **Publications**

**Total citation: 1027; h index: 18**

**Exclude self- citations of all authors: 886; h index: 16**

<sup>a</sup>: equal contribution

\*: correspondence

33. Szabó KE, Kyriakis E, **Psarra AG**, Karra AG, Sipos Á, Docsa T, Stravodimos GA, Katsidou E, Skamnaki VT, Liggri PGV, Zographos SE, Mándi A, Király SB, Kurtán T, Leonidas DD, Somsák L. Glucopyranosylidene-spiro-imidazolinones, a New Ring System: Synthesis and Evaluation as Glycogen Phosphorylase Inhibitors by Enzyme Kinetics and X-ray Crystallography. J Med Chem. 2019 Jul 11;62(13):6116-6136.

32. Karra AG, Konstantinou M, Tzortziou M, Tsialtas I, Kalousi FD, Garagounis C, Hayes JM, **Psarra AG\***. Potential Dissociative Glucocorticoid Receptor Activity for Protopanaxadiol and Protopanaxatriol. *Int J Mol Sci*. 2019; 20(1), 94.
31. Gorgogietas VA, Tsialtas I, Sotiriou N, Laschou VC, Karra AG, Leonidas DD Chrousos GP, Protopapa E, **Psarra AG\***. Potential interference of aluminum chlorohydrate with estrogen receptor signaling in breast cancer cells. *J Mol Biochem*. 2018;7(1):1-13.
30. Anifandis G\*, Amiridis GS, Gavriil EK, Gorgogietas VA, Dafopoulos K, Daponte A, Dovolou E, Kachpani E, Mamuris Z, Messini CI, **Psarra AG\***. The *in vitro* impact of the herbicide Roundup on human sperm motility and sperm mitochondrial functionality. *Toxics*. 2017 Dec 21;6(1).
29. Kantsadi A, Stravodimos GA, Apostolou A, Kyriakis E, Gatzona P, Liggri P, Theofanous S, Gorgogietas VA, Kissa A, Psachoula C, Lemonakis L, Chatzileontiadou D, **Psarra AG.**, Skamnaki VT, Haroutounian SA, and Leonidas DD Biochemical assessment of the inhibitory potency of polyphenolic extracts from byproducts of industrial juicing process of *Punica granatum* against glycogen phosphorylase. Affinity crystallography reveals the most bioactive ingredients. *Curr Drug Discov Technol*. 2018;15(1):41-53.
28. Nicolaides NC, Kino T, Roberts ML, Katsantoni E, Sertedaki A, Moutsatsou P, **Psarra AMG**, Chrousos GP, and Charmandari E. The Role of S-Palmitoylation of the Human Glucocorticoid Receptor (hGR) in Mediating the Nongenomic Glucocorticoid Actions. *J Mol Biochem*. 2017;6(1):3-12.
27. Georgatza D, Gorgogietas VA, Kylindri P, Charalambous MC, Papadopoulou KK, Hayes JM, **Psarra AMG\***. The triterpene echinocystic acid and its 3-O-glucoside derivative are revealed as potent and selective glucocorticoid receptor agonists. *Int J Biochem Cell Biol*. 2016 Aug 31;79:277-287.
26. Amoutzias G., Giannoulis T, Moutou KA, **Psarra AMG**, Stamatis C, Tsipourlianos A, Mamuris Z. SNP identification through transcriptome analysis of the European brown hare (*Lepus europaeus*): cellular energetics and mother's curse. *PlosOne* 2016 Jul 26;11(7):e0159939
25. Nicolaides NC, Skyrila E, Vlachakis D, **Psarra AMG**, Moutsatsou P, Sertedaki A, Kossida S, Charmandari E. Functional characterization of the hGR $\alpha$ T556I causing Chrousos syndrome. *Eur J Clin Invest*. 2016 Jan;46(1):42-9.
24. Nicolaides NC, Geer EB, Vlachakis D, Roberts ML, **Psarra AM**, Moutsatsou P, Sertedaki A, Kossida S, Charmandari E. A Novel Mutation of the hGR Gene Causing Chrousos Syndrome. *Eur J Clin Invest*. 2015 Aug;45(8):782-91
23. Kantsadi AL, Apostolou A, Theofanous S, Stravodimos GA, Kyriakis E, Gorgogietas VA, Chatzileontiadou DS, Pegiou K, Skamnaki VT, Stagos D, Kouretas D, **Psarra AMG**, Haroutounian SA, Leonidas DD. Biochemical and biological assessment of the inhibitory potency of extracts from vinification byproducts of *Vitis vinifera* extracts against glycogen phosphorylase. *Food Chem Toxicol*. 2014 May;67:35-43
22. Simoes<sup>a</sup> D.C.M., **Psarra<sup>a\*</sup> A.-M.G.**, Mauad T., Pantou I., Roussos C., Sekeris C.E., Gratzou C. (2012) Glucocorticoid and estrogen receptors are reduced in mitochondria of lung epithelial cells in asthma. *PLoS ONE* 7(6): e39183.
21. Kantsadi, A.L., Manta, S., **Psarra, A.-M.G.**, Dimopoulou A., Kiritsis, C., Parmenopoulou, V.T. Skamnaki, P. Zoumpoulakis, S.E. Zographos, D.D. Leonidas<sup>a\*</sup> and D. Komiotis (2012) The binding of C5-alkynyl and alkylfurano[2,3-*d*]pyrimidine glucopyranonucleosides to glycogen phosphorylase b. Synthesis, biochemical and biological assessment. *Eur J Med Chem*. 54:740-749.
20. Kantsadi A.L., Hayes J.M., Manta S., Skamnaki V.T, Kiritsis C., **Psarra A.-M.G.**, Koutsogiannis Z., Dimopoulou A., Theofanous S., Nikoleousakos N., Zoumpoulakis P., Kontou M., Papadopoulos G., Zographos S.E., Komiotis D., Leonidas D.D. (2012) The  $\sigma$ -

- hole phenomenon of halogen atoms forms the structural basis of the strong inhibitory potency of C5 halogen substituted lucopyranosyl nucleosides towards glycogen phosphorylase b. *ChemMedChem* 7:722-732.
19. **Psarra A.-M.G.\***, Sekeris C.E. (2011) Glucocorticoids induce mitochondrial gene transcription in HepG2 cells Role of the mitochondrial glucocorticoid receptor. *Biochim Biophys Acta* 1813:1814-1821.
  18. **Psarra A.-M.G.\***, Hermann S., Panayotou G., and Spyrou, G. (2009) Interaction of mitochondrial thioredoxin with glucocorticoid receptor and NF-κB modulates glucocorticoid receptor and NF-κB signalling in HEK-293 cells. *Biochem J.* 422:521-531.
  17. **Psarra A.-M.G.** Sekeris C.E. (2009) Glucocorticoid receptors and other nuclear transcription factors in mitochondria and possible functions. *Biochim Biophys. Acta.* 1787:431-436. Review
  16. **Psarra A.-M.G.**, and Sekeris, C.E. (2008) Steroid and Thyroid Hormone Receptors in Mitochondria. *IUBMB Life* 60:210-23. Review
  15. Tziveleka L.-A., **Psarra A.-M.G.**, Tsiourvas D., and Paleos C.M. (2008) Synthesis and Evaluation of Functional Hyperbranched Polyether Polyols as Prospected Gene Carriers. *Int. J. Pharm.* 356:314-24.
  14. **Psarra A.-M.G.**, and Sekeris C.E. (2008) Nuclear receptors and other nuclear transcription factors in mitochondria: Regulatory molecules in a new environment. *Biochim Biophys Acta.* 1783:1-11.
  13. Solakidi S., **Psarra A.-M.G.**, and Sekeris C.E. (2007) Differential distribution of glucocorticoid and estrogen receptor isoforms: localization of GRbeta and ERalpha in nucleoli and GRalpha and ERbeta in the mitochondria of human osteosarcoma SaOS-2 and hepatocarcinoma HepG2 cell lines. *J Musculoskelet Neuronal Interact.* 7:240-245. Review
  12. Tziveleka L.-A., **Psarra A.-M.G.**, Tsiourvas D., and Paleos C.M. (2007) Synthesis and Characterization of Guanidinylated Poly(propylene imine) Dendrimers as Gene Transfection Agents. *J. Control Release* 117:137-146.
  11. Paradissis A., Hatziantoniou S., Georgopoulos A., **Psarra A.-M.G.**, Dimas K, and Demetzos C. (2007) Liposomes modify the subcellular distribution of sclareol uptake by hct-116 cancer cell lines *Biomed Pharmacother* 61:120-124.
  10. **Psarra A.-M.G.**, Solakidi S., and Sekeris C.E. (2006) The mitochondrion as a primary site of action of regulatory agents involved in neuroimmunomodulation. *Ann NY Acad Sci.* 1088:12-22. Review
  9. **Psarra A.-M.G.**, Solakidi S., and Sekeris C.E. (2006) The mitochondrion as a primary site of action of steroid and thyroid hormones: presence and action of steroid and thyroid hormone receptors in mitochondria of animal cells. *Mol. Cell Endocrin.* 246:21-33. Review
  8. Solakidi S. **Psarra A.-M.G.**, Nikolaropoulos S., and Sekeris, C.E. (2005) Estrogen receptors {alpha} and {beta} (ER{alpha} and ER{beta}) and androgen receptor (AR) in human sperm: localization of ER{beta} and AR in mitochondria of the midpiece. *Hum Reprod.* 20:3481-3487.
  7. **Psarra A.-M.G.**, Solakidi S., Trougakos I.P, Margaritis L.H, Spyrou G., and Sekeris, C.E. (2005) Glucocorticoid receptor isoforms in human hepatocarcinoma HepG2 and SaOS-2osteosarcoma cells: presence of glucocorticoid receptor alpha in mitochondria and of glucocorticoid receptor beta in nucleoli. *Int J Biochem Cell Biol* 37:2544-2558.
  6. Solakidi S., **Psarra A.-M.G.**, and Sekeris C.E. (2005) Differential subcellular distribution of estrogen receptor isoforms:localization of ERalpha in the nucleoli and ERbeta in the mitochondria of human osteosarcoma SaOS-2 and hepatocarcinoma HepG2 cell lines. *Biochim Biophys Acta* 2005 1745:382-392.

5. **Psarra A.-M.G.\***, Bochaton – Piallat M.-L., Gabbiani G., Sekeris C.E., and Tsacopoulos M. (2003) Localization of glucocorticoids receptor in salamander retina. Mitochondrial localization of the receptor in müller cells. *Glia* 41:38-49.
4. Moutsatsou P., **Psarra A.-M.G.**, Tsiapara A., Paraskevakou H., Davaris P., and Sekeris C.E. (2001) Localization of the glucocorticoid receptor in rat brain mitochondria. *Arch Biochem Biophys* 386:69-78.
3. Moutsatsou P., Kazazoglou T., Fleischer-Lambropoulos H., **Psarra A.-M.G.**, Tsiapara A., Sekeris C.E., Stefanis C., and Vernadakis A. (2000) Expression of the glucocorticoid receptor in early and late passage C-6 glioma cells and in normal astrocytes derived from aged mouse cerebral hemispheres. *Int J Dev Neurosci* 18: 329-335.
2. **Psarra A.-M.G.\***, Pfeiffer B., Giannakopoulou M., Sotiroudis T.G., Stylianopoulou F., and Hamprecht, B. (1998) Immunohistochemical localization of glycogen phosphorylase kinase in rat brain slices and in glial and neuronal primary cultures. *J Neurocytol (Brain Cell Biology)* 27:779-790.
1. **Psarra A.-M.G.** and Sotiroudis T.G. (1996) Subcellular distribution of phosphorylase kinase in rat brain. Association of the enzyme with mitochondria and membranes. *Int J Biochem Cell Biol* 28:29- 42.

#### **Chapter in book**

1. Sotiroudis T.G., Maridakis G.A., **Psarra A.-M.G.** and Evangelopoulos A. (1995) Phosphorylase Kinase: A Protein Kinase For All Seasons. In: Packer L. and Wirtz, K. (eds) Signalling Mechanisms from Transcription Factors to Oxidative Stress. NATO ASI Series Vol. H 92, pp 139-156, Springer- Verlag, Berlin.

#### **Participations in Conferences**

Participation in more than 47 national and international conferences

**Covers in scientific journals** (two: *Glia*, Vol 41, 2003; *Archives of Biochemistry and Biophysics*, Vol 386, 2001)

