

## Curriculum Vitae Lucía Núñez

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**Present Position:** Assistant Professor, University of Valladolid since 2006.  
Institute of Molecular Biology and Genetics, joint center between The University of Valladolid and The Spanish Research Council (Consejo Superior de Investigaciones Científicas).

### Education:

- BS, Chemistry. Valladolid University School of Sciences. 1991.
- Ph.D. in Physiology. Valladolid University School of Medicine. 1995.

### Past Positions:

- 2001-2006. "Ramón y Cajal" Fellow. Institute for Molecular Biology and Genetics (IBGM). Spanish Research Council and Valladolid University.
- 1999-2001. Postdoctoral Fellow. University of Valladolid, Valladolid, Spain.
- 1996-1998. Postdoctoral Fellow. Medical University of South Carolina, Charleston, SC (USA).
- 1992-1995. Graduate student. Valladolid University School of Medicine. Mentor, Ana Sánchez & J. García-Sancho.

### Research Grants as Principal Investigator:

- Mechanisms of neuroprotection in Alzheimer: Mitochondria and mitochondrial calcium as targets of salicylate and estrogens. Supported by Instituto de Salud Carlos III (136.800 €). 2005-2007.
- Mechanisms of neuroprotection in Alzheimer: Mitochondria and mitochondrial calcium as target of salicylate and estrogens. Supported by Junta de Castilla y León (14.300 €). 2005-2007.
- Mechanisms involved in neuronal cell damage: subcellular calcium and specific gene expression. Supported by Junta de Castilla y León (11.213 €). 2002-2004.
- Neuronal physiology and pathophysiology. 6.000 € plus 5 years salary. Supported by the Ramon y Cajal programme. 2002-2006.

## List of Publications

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1. **Núñez L**, Valero RA, Senovilla L, Sanz S, García-Sancho J and Villalobos C. (2006) Cell proliferation depends on mitochondrial Ca<sup>2+</sup> uptake: Inhibition by salicylate. *J Physiol (London)* 571(1), 57-73.
2. Villalobos C, Nadal A, **Núñez L**, Quesada I, Chamero P, Alonso MT and García-Sancho J (2005) Bioluminescence imaging of nuclear calcium oscillations in intact pancreatic islets of Langerhans of the mouse. *Cell Calcium* 38, 131-139.
3. Villalobos C, **Núñez L** and García-Sancho J (2004) Phenotypic characterization of multifunctional somatotropes, gonadotropes and mammatropes in the mouse anterior pituitary. *Pflügers Arch - Eur J Physiol* 449, 257-264.
4. Villalobos C, **Núñez L** and García-Sancho J (2004) Anterior pituitary thyrotropes are multifunctional cells. *Am J Physiol* 287, E1166-E1170.
5. Senovilla L, **Núñez L**, de Campos JM, de Luis DA, Romero E, Sánchez A, García-Sancho J and Villalobos C (2004) Multifunctional cells in human pituitary adenomas: implications for paradoxical secretion and tumorigenesis. *J Clin Endocrinol Metab* 89, 4545-4552.
6. Ibares L, Villalobos C y **Núñez L** (2004) Salicilato, el principal metabolito de aspirina, inhibe la proliferación de células tumorales a dosis terapéuticas. *Clínica* 16 (Epoca V) 43-53.
7. **Núñez L**, Villalobos C, Senovilla L and García-Sancho J (2003) Multifunctional cells of mouse anterior pituitary reveal a striking sexual dimorphism. *J Physiol (London)* 549, 835-843.
8. Villalobos C, **Núñez L**, Faught WJ, Leamont DC, Boockfor FR. and Frawley, L.S. (2002) Calcium dynamics and resting transcriptional activity regulates prolactin gene expression. *Endocrinology* 143, 3548-3554.
9. Villalobos C, **Núñez L**, Montero M, García GA, Alonso MT, Chamero P, Alvarez J and García-Sancho J. (2002) Redistribución of Ca<sup>2+</sup> among cytosol and organelle during stimulation of bovine chromaffin cells. *FASEB J* 16, 343-353.
10. **Núñez L**. Análisis en tiempo real de la expresión de genes en células individuales (2001) *Fisiología* (Boletín de la Sociedad Española de Ciencia Fisiológicas), 4; 1:7-9.
11. Villalobos C, **Núñez L** and García-Sancho J. (2001) Mitochondrial [Ca<sup>2+</sup>] oscillations driven by local high [Ca<sup>2+</sup>] domains generated by spontaneous electric activity. *J. Biol. Chem.* 276(43), 40293-7.
12. Parente A, **Núñez L** y Villalobos C (2001) Caracterización inmunocitoquímica y funcional del cultivo primario de células adenohipofisarias de ratón. *Clínica 14 (V época)*. Diciembre 2001, 33-41.
13. Alarcón P, **Núñez L** and García-Sancho J. (2001) Direct actions of adrenergic agents on rat anterior pituitary cells. *Pflügers Arch. – Eur. J. Physiol.* 442, 834-841.

14. **Núñez L**, Villalobos C, Bookfor FR and Frawley LS. (2000) The relationship between pulsatile secretion and calcium dynamics in single, living GnRH neurons. *Endocrinology* **141**, 2012-2017.
15. **Núñez L**, Faught WJ and Frawley LS. (1998) Episodic gonadotropin-releasing hormone gene expression revealed by dynamic monitoring of luciferase reporter activity in single, living neurons. *Proc. Natl. Acad. Sci (USA)* **95**, 9648-9653.
16. **Núñez L** and Frawley LS (1998)  $\alpha$ -MSH potentiates the responsiveness of mammotropes by increasing  $Ca^{2+}$  entry. *Am. J. Physiol.* **274**, E971-E977.
17. **Núñez L**, Villalobos C and Frawley LS. (1997) Extracellular ATP as an autocrine/paracrine regulator of PRL release. *Am. J. Physiol.* **272**, E1117-E1123.
18. Villalobos C, **Núñez L**, Frawley LS, García-Sancho J and Sánchez A. (1997) Multi-responsiveness of single anterior pituitary cells to hypothalamic releasing hormones: a cellular basis for paradoxical secretion. *Proc. Natl. Acad. Sci (USA)* **94**, 14132-14137.
19. Villalobos C, **Núñez L** and García-Sancho J (1997) Mechanisms for stimulation of anterior pituitary cells by arginine and other amino acids. *J. Physiol. (London)* **502**, 421-431.
20. Villalobos C, Alonso-Torre SR, **Núñez L** and García-Sancho J. (1997) Functional ATP receptors in pituitary cells. *Am. J. Physiol.* **42**, 1963-1971.
21. Bayón Y, Hernández M, Alonso A, **Núñez L**, García-Sancho J, Leslie C, Sánchez-Crespo M. and Nieto ML. (1997) Cytosolic phospholipase  $A_2$  is coupled to muscarinic receptors in the human astrocytoma cell line 1321N1: characterization of the transducing mechanism. *Biochem. J.* **323**, 281-287.
22. **Núñez L**, Fonteriz RI, Sánchez A. and García-Sancho J. (1996) Mechanisms for synchronous calcium oscillations in cultured rat cerebellar neurons. *Eur. J. Neurosci.* **8**, 192-201.
23. **Núñez L** and García-Sancho J. (1996) Two different constituents of serum stimulate selectively neurons and glia in primary rat cerebellar neurons. *J. Physiol. (London)* **490**, 577-583. (cover)
24. Villalobos C, **Núñez L** and García-Sancho J. (1996) Functional glutamate receptors in a subpopulation of anterior pituitary cells. *FASEB J.* **10**, 654-660.
25. Alonso MT, Lim F, **Núñez L**, Represa J, Giráldez F and Schimmgang T. (1996) Enhanced neurite outgrowth of cerebellar granule cells by infection with an HSV-1 vector expressing BDNF. *Neuroreport* **7**, 3105-3108.
26. Jiménez C and **Núñez L**. (1996) Glutamate receptors in the developing cochlear ganglion *Int. J. Dev. Biol. Suppl.* **1**, 179S-180S.
27. Lómax RB, Michelena P, **Núñez L**, García-Sancho J, García AG and Montiel C. (1996) Different contributions of L- and Q-type channels to calcium signals and secretion in chromaffin cell subtypes. *Am. J. Physiol.* **272**, C476-C484.

28. Núñez L, De la Fuente M, García AG and García-Sancho J. (1995) Differential Ca<sup>2+</sup> responses of adrenergic and noradrenergic bovine chromaffin cells stimulated with various secretagogues. *Am. J. Physiol.* **269**, C1540-C1546.
29. Alonso A, Carvalho J, Alonso-Torre SR, Núñez L, Boscá L and Sánchez-Crespo M. (1995) Nitric oxide synthesis in rat peritoneal macrophages is induced by IgE/DNP complex and cyclic AMP analogues. Evidence in favor of a common signaling mechanism. *J. Immunol.* **145**, 6475-6483.

### Invited Talks

- *Mechanisms of Neuroprotection: mitochondria and mitochondrial calcium. Joint meeting IBGM-Max Planck Institute for Experimental Medicine. Göttingen, Germany 2005.*
- *La señal de calcio intracelular: Desde lo global a lo subcelular. Dentro del curso: Avances en transducción de señales y sus técnicas experimentales. Facultad de Biológicas. Universidad Autónoma de Madrid. Madrid, June 2004*
- *Real time monitoring of gene expression in single cells. Conferenciante Invitado a la sesión "MEET THE EXPERT" del XXXII Congress of the Spanish Society for Physiological Sciences (Joint Meeting with The Physiological Society). Tenerife, February 2003*
- *Medida de la expresión génica con luminiscencia. Dentro del curso: CURS DE TÈCNiques DE FISIOLòGIA CELLULAR. Instituto de Bioingeniería, Universidad Miguel Hernández, Alicante, octubre de 2002.*
- *Dinámica de la Expresión y Secreción de GnRH. Departamento de Fisiología, Facultad de Medicina, Universidad de La Laguna, La Laguna, Tenerife. 2002.*
- *Bases Celulares y Moleculares de la Secreción Pulsátil de GnRH. Instituto de Bioingeniería Universidad Miguel Hernandez. Alicante 2001.*

### Stays in Foreign Labs

- Medical University of South Carolina. Charleston, SC, USA. Jan 1996 – Jan 1999. (L. Stephen Frawley Lab).
- National Institute for Medical Research. Mill Hill, London, UK. July-August, 1993. (Dr. Jack Price's Lab).

### Societies

- Endocrine Society
- The Physiological society
- Sociedad Española de Ciencias Fisiológicas
- Sociedad Española de Bioquímica y Biología Molecular