

## CURRICULUM VITAE

**NAME:** Antonio    **SURNAME:** González    **NATIONALITY:** Spanish  
**DATE AND PLACE OF BIRTH:** 08/05/1969; Salamanca, Spain  
**SEX:** Male

**CONTACT ADDRESS:** Cell Physiology research Group (FICEL); Department of Physiology; Faculty of Veterinary Sciences; University of Extremadura; E-10003; Cáceres; Spain

**Phone:** +34 927 257000 (ext. 51377)

**Fax:** +34 927 2571510

**e-mail:** agmateos@unex.es

### QUALIFICATIONS:

- a) D.V.Med. First Class Honours (1992) University of Extremadura
- b) V.M.Sci. (1992) Title of project: "Characterization of the secretagogue effects of acetylcholine on the exocrine pancreatic secretion in the rat". University of Extremadura
- c) Ph.D. First Class Honours (1996) Title: "Ionic mechanisms of coupling in exocrine pancreatic secretion". University of Extremadura

**SPECIALIZATION:** Cell Biology and Physiology

### CARRER/EMPLOYEMENT:

1989-1992 Undergraduate student in the Department of Physiology, Faculty of Veterinary Sciences, University of Extremadura.

1990-1992 Research Student, Department of Physiology, Faculty of Veterinary Sciences, University of Extremadura.

1993-1996 MEC (Spanish Ministry of Education and Science) Research Fellow, University of Extremadura.

1997-1998 Post-doctoral Training in a foreign country. Acciones de Preparación al Plan Regional de Investigación. Cosejería de Educación y Juventud. Junta de Extremadura.

1999 Scientific Assistant, Department of Physiology II, Faculty of Medicine, University of Saarland.

2000-2001 Return Grant, Sistema de Ciencia-Tecnología-Economía-Sociedad de la Comunidad Autónoma de Extremadura (becas postdoctorales de Programa Propio). Acciones de Preparación al Plan Regional de Investigación. Consejería de Educación y Juventud. Junta de Extremadura.

2001-DATE Lecturer in Physiology, Department of Physiology, University of Extremadura, Cáceres (Spain).

2004-DATE Vicedean for Academic Management and Studies Coordinator, Faculty of Veterinary, University of Extremadura, Cáceres, (Spain).

### MEMBER OF PROFESSIONAL SOCIETIES:

- Physiological Society Ordinary Member
- Member of the Spanish Physiological Society
- Member of the European Society of Neurochemistry

## RESEARCH INTEREST:

I have 19 years of research experience. My specific interest is on Stimulus-Response Coupling. At the beginning of my research training I worked with anaesthetised animals focusing my research on the determination of pancreatic juice secretion and enzymes content. During my doctoral degree the studies were carried out in isolated pancreatic acinar cells both suspensions and single cell, using fluorescent probes (fura-2 and BCECF) for determinations of intracellular calcium and pH. During my postdoctoral training I have been working with confocal laser-scanning fluorescence technics, focussing the investigations onto the spatio-temporal aspects of calcium signalling.

My studies are also focused onto the role of mitochondria in calcium signalling and the physiology of the pancreatic acinar cells under oxidative stress conditions, employing confocal laser scanning microscopy, single (imaging) cell fluorimetry as well as spectrofluorimetry (cell suspensions studies).

In addition, actually I am carrying out studies on signal transduction in the central nervous system, hippocampus, based on cell cultures. My investigations employ astrocytes and neurones as cellular model. The techniques applied are as mentioned above confocal laser scanning microscopy, single (imaging) cell fluorimetry as well as spectrofluorimetry, conventional spectrophotometry, western blot analysis, and the research is focused onto oxidative stress and calcium signalling and cell function, and the role of antioxidants in cell physiology.

## TECHNIQUES:

Fresh cells preparation techniques; fluorimetry (cell suspensions); microspectrofluorimetry (single cell); confocal laser-scanning microfluorimetry; western blot; determinations of digestive enzymes secretion (amylase and trypsinogen); "in vivo" assays with anaesthetised animals (rat and guinea pig); little knowledge of HPLC and molecular biology techniques; cell culture.

**LANGUAGES:** Spanish and English (fluent both languages); German (level G III DAAD); Italian (elemental level).

## PUBLICATIONS:

### ***1.- Books (I.S.B.N.)***

*Title: Ionic mechanisms in pancreatic secretion coupling*

*Doctoral Thesis*

*Author: Antonio González*

*Editorial: University of Extremadura Publishers*

*City/Country: Cáceres /Spain*

*Year: 2006*

*I.S.B.N. 84-7723-702-6*

*Title of chapter: Apoptosis in nervous cells. Pp 93-128.*

*Title: Apoptosis: Involvement of Oxidative Stress and Intracellular Ca<sup>2+</sup> Homeostasis*

*Author: Antonio González*

*EDITORIAL: Springer. 238 p.*

*Year: 2009*

*ISBN: 978-1-4020-9872-7*

*Eds. Salido, Ginés María; Rosado, Juan Antonio.*

*Title: Animal Physiology. Self-help questionnaire.*

Authors: Antonio González and Ginés María Salido.  
EDITORIAL: Fénix Editora, 148 p.  
Year: 2010 ISBN: 978-84-614-5606-2

## 2.- Manuscripts.

- A. González, M.J. Pozo, P.J. Camello, G.M. Salido and J.A. Pariente. "Effects of phorbol esters and secretin on acetylcholine-evoked exocrine pancreatic secretion in the anaesthetized rat". *Pharmacology Communications*, 1993, Vol. 3, Nº. 3, 263-273.
- González, A., Pariente, J.A., Salido, G.M., Singh, J. and Wisdom, D. "Reciprocal changes in intracellular and extracellular magnesium in rat pancreatic acinar cells in response to different secretagogues". *Magnesium Research*, 1995, Vol. 8, Nº. 3, 215-222.
- A. González, P.J. Camello, J.A. Pariente and G.M. Salido. "Stimulus-secretion pathway for histamine in the exocrine pancreas". *The International Journal of Stress and Neuroprotection - Biogenic Amines*, 1996, Vol. 12, Nº 4, 343-352.
- Bragado M.J., San Román J.I., González A., García L.J., López M.A. and Calvo J.J. "Impairment of intracellular calcium homeostasis in the exocrine pancreas after caerulein-induced acute pancreatitis in the rat". *Clinical Science*, 1996, Vol. 91, 365-369.
- Camello C., Lajas A.I., González A., Camello P.J. and Pariente J.A. "Histamine does not potentiate cyclic AMP-mediated amylase secretion in the guinea pig pancreatic acinar cells". *Vascular Pharmacology (Anteriormente General Pharmacology)*, 1997, Vol. 29, No. 2, 211-215.
- A. González, P.J. Camello, J.A. Pariente and G.M. Salido. "Free cytosolic calcium levels modify intracellular pH in rat pancreatic acini". *Biochemical and Biophysical Research Communications*, 1997, Jan. 23 (3) 230: 652-656.
- A. González, J.A. Pariente, G.M. Salido and P.J. Camello. "Intracellular pH and Ca<sup>2+</sup> signalling in rat pancreatic acinar cells". *European Journal of Physiology (Pflügers Archives)*, 1997, 434: 609-614.
- J.A. Tapia, A. González, G.M. Salido and L.J. García. "Trypsin(ogen) secretion from guinea-pig pancreas". *The International Journal of Stress and Neuroprotection - Biogenic Amines*, 1997, Vol. 13, No. 5, 477-450.
- Luis. J. García, Juan A. Rosado, Antonio González and Robert T. Jensen. "CCK-stimulated tyrosine phosphorylation of p125<sup>FAK</sup> and paxillin is mediated by phospholipase C-dependent and independent mechanisms and requires the integrity of the actin cytoskeleton and participation of p21<sup>rho</sup>". *Biochemical Journal*, 1997, 327: 461-472.
- Antonio González, Fatima Pfeiffer, Andreas Schmid and Irene Schulz. "Effect of intracellular pH on acetylcholine-induced Ca<sup>2+</sup> waves in mouse pancreatic acinar cells". *American Journal of Physiology*, 1998, 275: C810-C817.
- Antonio González, Andreas Schmid, Lutz Sternfeld, Elmar Krause, Ginés M. Salido and Irene Schulz. "CCK -evoked Ca<sup>2+</sup> waves in isolated mouse pancreatic acinar cells are

*modulated by activation of cytosolic phospholipase A<sub>2</sub>, phospholipase D and protein kinase C". Biochemical and Biophysical Research Communications, 1999, Aug. 261 (3): 726-733.*

- Elmar Krause, Andreas Schmid, Antonio González and Irene Schulz. "Low cytoplasmic [Ca<sup>2+</sup>] activates I<sub>CRAC</sub> independently of Ca<sup>2+</sup> store depletion in RBL-1 cells". *Journal of Biological Chemistry*, 1999, **274** (52): 36957-36962.

- Schulz I., Krause E., González A., Göbel A., Sternfeld L. and Schmid A. "Agonist-stimulated pathways in calcium signaling of pancreatic acinar cells" Minireview." *Biological Chemistry - Hoppe Seyler*, 1999, **380**: 903-908.

- Antonio González, Irene Schulz and Andreas Schmid. "Agonist-evoked mitochondrial Ca<sup>2+</sup> signals in mouse pancreatic acinar cells". *Journal of Biological Chemistry*, 2000, **275** (49): 38680-38686.

- Siegel G., Sternfeld L., González A., Schulz I. and Schmid A. "Arachidonic acid modulates the spatiotemporal characteristics of agonist-evoked Ca<sup>2+</sup> waves in mouse pancreatic acinar cells." *Journal of Biological Chemistry*, 2001, **276** (20): 16986-16991.

- Antonio González, Pedro J. Camello, Ginés M. Salido and José A. Pariente. "Effect of XOD-catalyzed ROS generation on secretagogue-evoked calcium mobilization in mouse pancreatic acinar cells". *Biochemical Pharmacology*, 2001, **62**: 1621-1627.

- A. González, A. Schmid, G.M. Salido, P.J. Camello and J.A. Pariente. "XOD-catalyzed ROS generation mobilizes calcium from intracellular stores in mouse pancreatic acinar cells". *Cellular Signaling*, 2002, **14**: 153-159.

- Juan A. Rosado, Antonio González, Ginés M. Salido, and José A. Pariente. "Effects of reactive oxygen species on actin filament polymerization and amylase secretion in mouse pancreatic acinar cells". *Cellular Signalling*, 2002, **14**: 547-556.

- Antonio González and Ginés M. Salido. "Participation of mitochondria in calcium signaling in the exocrine pancreas". *Journal of Physiology and Biochemistry*, 2001, **57** (4): 331-340.

- Redondo PC, Lajas AI, Salido GM, Gonzalez A, Rosado JA, Pariente JA. "Evidence for secretion-like coupling involving pp60<sup>src</sup> in the activation and maintenance of store-mediated Ca<sup>2+</sup> entry in mouse pancreatic acinar cells". *Biochemical Journal* 2003 Feb 15;**370**(Pt 1):255-63.

- JA Pariente, PC Redondo, MP Granados, IA Lajas, A González, JA Rosado and GM Salido. "Calcium signaling in non-excitable cells". *Journal of the European Citizen's Quality of Life* 2003, **1**(1): 29-43.

- Antonio González, María P. Granados, Ginés M. Salido and José A. Pariente. "Changes in mitochondrial activity evoked by cholecystinin in isolated mouse pancreatic acinar cells". *Cellular Signalling*, 2003, **15/11**: 1039-1048.

- María P. Granados, Ginés M. Salido, José A. Pariente and Antonio González. "Generation of ROS in response to CCK-8 stimulation in mouse pancreatic acinar cells". *Mitochondrion*, 2004, **3**: 285-296.
- María A. Martínez, Ana I. Lajas, María D. Yago, Pedro C. Redondo, María P. Granados, Antonio González, Juan A. Rosado, Emilio Martínez-Victoria, Mariano Mañas and José A. Pariente. "Dietary virgin olive oil enhances the secretagogue-evoked calcium signalling in rat pancreatic acinar cells". *Nutrition, The International Journal of Applied and Basis Nutritional Sciences*, 2004, **20**: 536-541.
- Antonio González, María P. Granados, Ginés M. Salido and José A. Pariente. "H<sub>2</sub>O<sub>2</sub>-induced changes in mitochondrial activity in isolated mouse pancreatic acinar cells". *Molecular and Cellular Biochemistry*, 2005, **269**: 165-173.
- María P. Granados, Ginés M. Salido, José A. Pariente and Antonio González. "Effect of H<sub>2</sub>O<sub>2</sub> on CCK-8-evoked changes in mitochondrial activity in isolated mouse pancreatic acinar cells". *Biology of the Cell*, 2005, **97**: 847-856.
- Antonio González, María P. Granados, Ginés M. Salido and José A. Pariente. "Influence of free radicals on the physiology of the exocrine pancreas" (Minireview). *Current Topics in Biochemical Research* (2004), **6**: 47-55.
- Antonio González, María P. Granados, José A. Pariente and Ginés M. Salido. "H<sub>2</sub>O<sub>2</sub> mobilizes Ca<sup>2+</sup> from agonist- and thapsigargin-sensitive and insensitive intracellular stores and stimulates glutamate secretion in rat hippocampal astrocytes". *Neurochemical Research* (2006), **31**: 741-750.
- María P. Granados, Ginés M. Salido, Antonio González and José A. Pariente. "Dose-Dependent Effect of Hydrogen Peroxide on Calcium Mobilisation in Mouse Pancreatic Acinar Cells". *Biochemistry and Cellular Biology* (2006), **84**(1): 39-48.
- María A. Martínez-Burgos, María P. Granados, Antonio González, Juan A. Rosado, María D. Yago, Ginés M. Salido, Emilio Martínez-Victoria, Mariano Mañas and José A. Pariente. "Involvement of ryanodine-operated channels in tert-butylhydroperoxide-evoked Ca<sup>2+</sup> mobilisation in pancreatic acinar cells". *The Journal of Experimental Biology* (2006), **209**: 2156-2164.
- Antonio González, Ana M. Núñez, María P. Granados, José A. Pariente and Ginés M. Salido. "Ethanol impairs CCK-8-evoked amylase secretion through Ca<sup>2+</sup>-mediated ROS generation in mouse pancreatic acinar cells". *Alcohol* (2006), **38**(1): 51-57.
- Juan A. Rosado, Antonio González, Ginés M. Salido y José A. Pariente. "Homeostasis del ion calcio en células no excitables. Papel de las especies reactivas de oxígeno". *Boletín Informativo de la Sociedad Española de Ciencias Fisiológicas* (2006), **8** (2): 15-18.
- María P. Granados, Ginés M. Salido, José A. Pariente and Antonio González. "Modulation of CCK-8-evoked intracellular Ca<sup>2+</sup> waves by hydrogen peroxide in mouse pancreatic acinar cells". *Journal of Physiology and Pharmacology* (2007), **58** (3): 423-440.

- Antonio González, José A. Pariente and Ginés M. Salido. "Ethanol stimulates ROS generation by mitochondria through  $Ca^{2+}$  mobilization and increases GFAP content in rat hippocampal astrocytes". *Brain Research* (2007), **1178**: 28-37. **Cover of the Journal** *Brain Research*, Vol. **1178**, 31 Octubre 2007.
- Miguel Salazar, José A. Pariente, Ginés M. Salido and Antonio González. "Ethanol induces glutamate secretion by  $Ca^{2+}$  mobilization and ROS generation in rat hippocampal astrocytes". *Neurochemistry International* (2008), **52**: 1061-1067.
- Miguel Salazar, José A. Pariente, Ginés M. Salido and Antonio González. "Ebselen increases cytosolic free  $Ca^{2+}$  concentration, stimulates glutamate release and increases GFAP content in rat hippocampal astrocytes". *Toxicology* (2008), **244**: 280-291.
- Antonio González, José A. Pariente and Ginés M. Salido. "Ethanol impairs calcium homeostasis following CCK-8 stimulation in mouse pancreatic acinar cells". *Alcohol* (2008), **42**: 565-573.
- Sara Morgado, María P. Granados, Ignacio Bejarano, José J. López, Ginés M. Salido, Antonio González, José A. Pariente. "Role of intracellular calcium on hydrogen peroxide-induced apoptosis in rat pancreatic acinar AR42J cells". *Journal of Applied Biomedicine* (2008), **6**(4): 211-224.
- Antonio González and Ginés M. Salido. "Ethanol alters the physiology of neuron-glia communication". *International Review of Neurobiology* (2009), **88**: 167-198.
- Marcela Fernandez-Sanchez, Angel del Castillo-Vaquero, Gines M Salido and Antonio Gonzalez. "Ethanol exerts dual effects on calcium homeostasis in CCK-8-stimulated mouse pancreatic acinar cells" *BMC Cell Biology* (2009), **10**:77.
- Angel Del Castillo-Vaquero, Ginés M. Salido and Antonio González. "Increased calcium influx in the presence of ethanol in mouse pancreatic acinar cells". *International Journal of Experimental Pathology* (2010), **91**: 114-124.
- Martín-Montañez, Elisa; Acevedo, Maria José; López-Téllez, Juan Félix; Duncan, Raymond Scott; Mateos, Antonio González; Pavía, José; Koulen, Peter; Khan, Zafar U.. "Regulator of G-protein signaling 14 protein modulates  $Ca^{2+}$  influx through Cav1 channels". *Neuroreport* (2010) **21**(16):1034-1039 .
- José A. Tapia, Ginés M. Salido and Antonio González. "Ethanol consumption as inductor of pancreatitis". *World Journal of Gastrointestinal Pharmacology and Therapeutics* (2010), **1**(1), 3-8.  
**Cover of the Journal** *World. J.Gastrointest. Pharmacol. Ther.*, Vol. **1**(1), 6 Febrero 2010.
- Ramón Rivera-Barreno, Angel Del Castillo-Vaquero, Ginés M. Salido and Antonio González. "Effect of cinnamtanninB-1 on CCK-8-evoked responses in mouse pancreatic acinar cells". *Clinical and Experimental Pharmacology and Physiology* (2010), **37**, 980-988.

- Angel del Castillo-Vaquero, Gines M. Salido and Antonio Gonzalez. "Melatonin induces calcium release from CCK-8- and thapsigargin-sensitive cytosolic stores in pancreatic AR42J cells". *Journal of Pineal Research* (2010), **49** (3), 256-263.

- Angel del Castillo-Vaquero, Alvaro Miro-Moran, Jose A. Tapia, Gines M. Salido and Antonio Gonzalez. "Melatonin induces changes in mitochondrial parameters and reduces viability in pancreatic tumour AR42J cells". *Journal of Pineal Research Article first published online: 30 NOV 2010. DOI: 10.1111/j.1600-079X.2010.00834.x.*

#### **STAY IN FOREIGN LABORATORIES:**

Place: University of Central Lancashire, Department of Applied Biology, Preston, U.K.

Period: September 1993, September 1994 (with Prof. Jaipaul Singh).

Purpose: training in spectrofluorimetry determinations.

Place: University of Newcastle upon Tyne, Department of Physiology, Newcastle upon Tyne, U.K.

Period: October 1994 (with Dr. J. I. Gillespie and Prof. B. A. Argent).

Purpose: training in microspectrofluorimetry techniques, imaging analysis.

Place: Universität des Saarlandes. II. Physiologisches Institut. Medizinische Fakultät. Homburg/Saar. Germany (with Prof. Dr. I. Schulz).

Period: November 1996.

Purpose: training in confocal laser scanning techniques.

Place: Universität des Saarlandes. II. Physiologisches Institut. Medizinische Fakultät. Homburg/Saar. Germany (with Prof. Dr. I. Schulz).

Period: two years; January 1997 - December 1998.

Purpose: postdoctoral stay.

Place: Universität des Saarlandes. II. Physiologisches Institut. Medizinische Fakultät. Homburg/Saar. Germany (with Prof. Dr. I. Schulz).

Period: one year; January 1999 - December 1999.

Purpose: Scientific Assistant.

Place: Universität des Saarlandes. II. Physiologisches Institut. Medizinische Fakultät. Homburg/Saar. Germany (with Prof. Dr. I. Schulz).

Period: Octobre-November 2003.

Purpose: training in molecular biology techniques

#### **REFEREE/REVIEWER FOR THE FOLLOWING JOURNALS:**

The Open Clinical Chemistry Journal (Board Member); Alcohol and Alcoholism; Applied and Environmental Microbiology and Journal of Bacteriology; Brain Research; Clinical and Experimental Pharmacology and Physiology; Free Radical Biology and Medicine; International Journal of Experimental Pathology; Journal of Affective Disorders; Journal of Experimental Biology; Journal of Neurochemistry; Journal of Physiology and Biochemistry; Neurochemical Research; Neurotoxicity Research; Pflügers Archiv-European Journal of Physiology; Toxicology.

