



**A. PERSONAL INFORMATION**

Date 05/10/2020

Name and Surname	M <sup>a</sup> Alba Martínez Burgos		
DNI / NIE / passport	52517791M	Age	50
Investigator identification number	Researcher ID		
	Orcid Code	0000-0002-3095-6543	

**A.1. Current professional status**

Organism	University of Granada		
Department/Center	Department of Physiology/Faculty of Pharmacy		
Address	Campus de Cartuja s/n, 18071 Granada		
Phone	607303864	mail	<a href="mailto:malbam@ugr.es">malbam@ugr.es</a>
Professional category	University Professor	Initial Date	28/04/2019
UNESCO CODES	241107, 3206, 3309		
Key words	Dietary fat, Mediterranean Diet, digestive physiology and pathophysiology, nutritional databases, nutritional epidemiology		

**A.2. Academic Formation** (*title, institution, date*)

Bachelor / Degree / Doctorate	University	Year
Bachelor in Biology	Granada	1993
Doctorate in Biology	Granada	2001

**A.3. General indicators of quality of scientific production**

Investigation sexenios: 2.

**B. FREE RESUME SUMMARY** (maximum 3500 characters, including blank spaces)

My research activity has been continuous over time and has focused mainly on the field of knowledge of Digestive Physiology and Nutrition, as well as Food Composition Databases, as reflected in the publication of 44 indexed scientific publications. and another 7 not indexed, but of great importance in the corresponding area. I have authored 2 book chapters (1 of them as the first author) and co-author of 1 book.

I have participated in 46 relevant international and national congresses in my research area, having published the corresponding abstracts in abstract books and / or in indexed journals.

I have participated, uninterruptedly, in a total of 22 competitive Research Projects and Contracts, financed with public funds, highlighting 2 European Projects, corresponding to the 6th (EuroFIR) (2005-2009) and 7th (TDS-Exposure) Framework Programs, respectively. Specifically, of the last one (2012/2016) I have been Principal Investigator (TDS- Exposure-FP7-KBBE-2011-5. N° 289108). I am a member of the European Network of Excellence: EuroFIR AISBL. I have participated in numerous meetings throughout Europe, organized by both European projects. Also, in connection with EuroFIR AISBL, I am a member of the research and technical team responsible for the creation and maintenance of the Spanish Food Composition Database (BEDCA), with the financing and coordination of the Spanish Agency for Consumption, Food Safety and Nutrition (AECOSAN), of the Ministry of Health, Social Services and Equality.

As a member of the Institute of Nutrition and Food Technology "José Matáix" (appointed Competent Body by EFSA) and member-partner (partner) of the 2 European Projects, I have been invited by EFSA (European Food Safety Agency) to participate in a Talk-Colloquium in Parma, Italy (2010), for the establishment of quality standards in Food Composition Data and I have also participated, together with said International Agency, in different meetings of the Project of which I have been Principal Investigator.

I also want to highlight my continuous and growing interaction with the Business and Technology Sector, in R & D & i, in the field of Nutrition and Agri-food, as shown by the different collaborations with Puleva Biotech, S.A. (leader of the consortium to carry out the

PRONAOS project) or DMC RESEARCH CENTER S.L. (DOMCA) (leader in the Agri-Food Biotechnology sector), researching with its patented or patented products.

I have developed a Nutrition (Food and Health) software, as a tool for transferring knowledge and results to the productive sector.

I have completed 1 predoctoral research stay in the Surgery Laboratory of the University of Alicante and 2 postdoctoral stays, one in the Department of Physiology of the University of Extremadura and the other in the Division of Human Nutrition And The Graduate School AG (University of Wageningen, The Netherlands), totaling 38 months. I have also made a short stay at the National Food Center (CNA), of the Spanish Agency for Consumption, Food Safety and Nutrition (AECOSAN), Ministry of Health, Social Services and Equality. In this sense, I must indicate that both the number and duration of my stays have been and are conditioned by my teaching obligations at the UGR.

### **C. MOST RELEVANT MERITS (ordered by typology)**

#### **C.1. Publications**

Mañas M, et al. Dietary intake and anthropometric measures in a spanish students group (1996). Int J Vit Nutr Res 66, 71-377.

Yago MD, et al. Plasma PYY and PP in dogs after long-term adaptation to dietary fats of different degrees of saturation: olive and sunflower oil (1997). Journal of Physiology and Biochemistry 53, 171.

Yago MD, et al. Plasma peptide YY and pancreatic polypeptide in dogs after long-term adaptation to dietary fats of different degrees of saturation: olive and sunflower oil (1997). J Nutr Biochem 8, 502-507.

Mañas M, et al. Pancreatic enzyme content in hypercholesterolaemic rabbits: the influence of recovery diets that differ in the type of dietary fat (1998). The Journal of Physiology, 509P,13P.

Yago MD, et al. Adaptation of the exocrine pancreas to the dietary fats (2000). J Physiol Biochem 56, 295-306.

Martínez MA, et al. Influence of dietary cholesterol on the adaptation of rabbit pancreatic membranes to dietary fat (2002). The Journal of Physiology 543P, 13P.

Díaz R, et al. Comparison of the effects of dietary sunflower oil and virgin olive oil on rat exocrine pancreatic secretion in vivo (2003). Lipids 38, 1119-1126.

Martínez-Victoria E, et al. Modulation of amylase release and intracellular Ca<sup>2+</sup> mobilisation by dietary fat in isolated rat pancreatic acinar cells (2003). The Journal of Physiology 548P, 1P.

Martínez MA, et al. Dietary fatty acids change membrane lipid composition in rabbits with experimental atherosclerosis. Is this fact involved in the enzymatic secretion pattern? (2003). The Journal of Physiology 548P, 3P-4P.

Yago MD, et al. Dietary-induced changes in the fatty acid profile of rat pancreatic membranes are associated with modifications in acinar cell function and signalling (2004). British Journal of Nutrition 91, 227-234.

Martínez MA, et al. Dietary virgin olive oil enhances secretagogue-evoked calcium signalling in rat pancreatic acinar cells (2004). Nutrition 20, 536-541.

- Yago MD, et al. Effect of the type of dietary fat on biliary lipid composition and bile lithogenicity in humans with cholesterol gallstone disease (2005). *Nutrition* 21(3), 339-347.
- Aguilera CM, et al. Monounsaturated and w-3 but not w-6 polyunsaturated fatty acids improve hepatic fibrosis in hypercholesterolemic rabbits (2005). *Nutrition* 21(3), 367-371.
- Yago MD, et al. Menadione-induced cell injury in pancreatic acini from rats diets containing different types of dietary fat (virgin olive oil and sunflower oil) (2005). *J Physiol Biochem* 61, 206.
- Martínez MA, et al. Tert-butylhydroperoxide mobilizes calcium from mitochondrial and non-mitochondrial intracellular stores in rat pancreatic acinar cells (2005). *J Physiol Biochem* 61, pp.
- Audi N, et al. Effects of the type of dietary fat on acetylcholine-evoked amylase secretion and calcium mobilisation in isolated pancreatic acinar cells (2005). *J Physiol Biochem* 61, 207.
- Marques D, et al. Release of Calcium from intracellular stores in rat parotid acinar cells by hydrogen peroxide: A preliminary study (2005). *J Physiol Biochem* 61, 260.
- Martínez-Burgos MA, et al. Involvement of ryanodine-operated channels in tert-butylhydroperoxide-evoked  $Ca^{2+}$  mobilisation in pancreatic acinar cells (2006). *J Exp Biol* 209, 2156-2164.
- Patel R, et al. Effect of insulin on acetylcholine-evoked amylase release and calcium mobilization in streptozotocin-induced diabetic rat pancreatic insufficiency in streptozotocin-induced diabetes mellitus (2006). *Ann N Y Acad Sci* 1084, 58-70.
- Patel R, et al. Mechanism of exocrine pancreatic insufficiency in streptozotocin-induced diabetes mellitus (2006). *Ann N Y Acad Sci* 1084, 71-88.
- Yago MD, et al. Effects of the type of dietary fat on acetylcholine-evoked amylase secretion and calcium mobilization in isolated rat pancreatic acinar cells (2006). *J Nutr Biochem* 17, 242-249.
- Audi N, et al. Membrane lipid composition of pancreatic AR42J cells. Modification by exposure to dietary fatty acids (2007). *Experimental Biology and Medicine* 232, 532-541.
- Audi N, et al. Differentiation of AR42J cells: effects on adaptation of membrane lipidic profile and amylase secretion (2007). *Acta Physiol* 190 (655), 86.
- Mata A, et al. Magnesium-calcium signalling in rat parotid acinar cells: effects of acetylcholine (2008). *Mol Cell Biochem* 307, 193-207.
- Mata A, et al. Effect of hydrogen peroxide on secretory response, calcium mobilisation and caspase-3 activity in the isolated rat parotid gland (2008). *Mol Cell Biochem* 319(1-2), 23-31.
- N. Audi, et al. Effects of IL-6 on amylase secretion and calcium signalling in pancreatic AR42J cells: modulation by membrane fatty acid composition (2008). *Proceedings of the Nutrition Society* 67 (OCE), E25.
- Martínez-Burgos MA, et al. Building a unified spanish food database according to EuroFIR specifications (2009). *Food Chemistry* 113, 784-788.
- Santana CV, et al. Influence of dietary lipid composition on the pancreatic lipid profile (2009). *AgoFOOD Industry hi-tech* 20(6), 48-51.

Audi N, et al. Adaptation of membrane lipid profile and amylase secretion of AR42J cells to fatty acids in culture medium: influence of exposure period (2009). *Acta Physiol* 195 (667), 154.

Lopez-Millan MB, et al. Modification of membrane fatty acid composition of pancreatic AR42J cells influences bile acid-induced Ca<sup>2+</sup> responses (2009). *Acta Physiol* 195 (667), 154-155.

C. Santana, et al. Influence of membrane fatty acid composition on cell viability and lipid peroxidation in a cell model (AR42J) of cerulein-induced acute pancreatitis (2010). *Proceedings of the Nutrition Society* 69 (OCE3), E313.

Santana Ojeda C, et al. Generación de especies reactivas de oxígeno (ERO) en un modelo in vitro de pancreatitis. Influencia de la composición lipídica de membrana y de un antioxidante del aceite de oliva (2011). *Nutr Hosp* 26, 42.

Lopez-Millan MB, et al. Impairment of calcium homeostasis and secretory response in AR42J cells after cerulein treatment. Influence of changes in membrane fatty acid profile (2012). *Acta Physiol* 206 (693), 125.

Lopez-Millan MB, et al. Modificatipon of membrane fatty acid composition affects cell death and antioxdant defences in cerulein-stimulated AR42J cells (2012). *Acta Physiol* 206 (693), 128.

Alcala-Bejarano J, et al. Influence of two functional ingredients on the plasma concentrations of insulin, leptin, ghrelin and peptide YY (OYY) in rats (2012). *Acta Physiol* 206 (693), 161.

López Millan MB, et al. Actividad funcional del hidroxitirosol en células AR42J tratadas con ceruleína (2012). *Nutr Hosp* 27 (5), 1719.

Ortiz-Franco, M, et al. Micronutrient status in a high intensity training collective (2013). *Nutr Clin Diet Hosp* 33 (1), 73.

Ortiz-Franco M, et al. Unbalanced nutrient intake in adult men with intense training: mineral study (2013). *Ann Nutr Metab* 63(1), 481.

García Cobo R, et al. Effects of a natural compound from aliaceae on the egg quality (2014). *Acta Physiol* 212 (698), 61.

Martínez-Victoria E, et al. Intake of energy and nutrients; harmonization of food composition databases (2015). *Nutr Hosp* 31 (3), 168-173.

Alcalá-Bejarano J, et al. Macronutrientes, ingesta de alimentos y peso corporal; papel de la grasa (2015). *Nutr Hosp* 31(1), 46-54.

Martínez MA, Yago MD, Mesa MD, Gil A, López-Millán MB, Martínez-Victoria E, Mañas M. Effects of a Western-style diet high in cholesterol and saturated fat on the rabbit exocrine pancreas (2015). *Turk J Biol* 39, 765-774.

Turrini A, et al. A conceptual framework for the collection of food products in a Total Diet Study (2018). *Food Addit Contam Part A Chem Anal Control Expo Risk Assess* 35(2), 171-190.

Urquiza-Salvat N, et al. Adherence to Mediterranean diet and risk of prostate cancer (2018). *Aging Male* 15, 1-7.

Martínez-Burgos MA, et al. Updating the Spanish Data base Food Composition (BEDCA): implementation of the version 2.3 (2018). J of Physiol and Biochem, <https://doi.org/10.1007/s13105-018-0656-7>, P2-35.

Martínez-Burgos MA, et al. Nutritional evaluation and risk of exposure to contaminants through the diet, in students of the University of Granada (2018). J of Physiol and Biochem, <https://doi.org/10.1007/s13105-018-0656-7>, P2-36.

Martínez Burgos MA, et al. Nutritional evaluation, including phenolic components, and the risk of exposure to contaminants of the diet, in students of the degree in Biotechnology, of the University of Granada (2018): Rev Esp Nutr Comunitaria, 24 (2), 160.

Martínez-Burgos MA, et al.. New recipe calculation procedure included in Spanish Food Composition Database (BEDCA) (2018). Rev Esp Nutr Comunitaria 24(2), 160-161.

Turrini A, et al. A conceptual framework for the collection of food products in a Total Diet Study. 2018. Food Addit Contam Part A Chem Anal Control Expo Risk Assess 35(2): 171-190.

Urquiza-Salvat N et al. Adherence to Mediterranean diet and risk of prostate cancer. 2018. Aging Male 15: 1-7.

## C.2. Chapters of the book

Matáix J, et al. Tablas de Composición de Alimentos Españoles, 2ª ed. (1995). Servicio de Publicaciones de la Universidad de Granada, Granada, 1-343. ISBN: 84-338-1841-4.

Yago MD, et al. Effects of olive oil on fatty acid composition of pancreatic cell membranes. Modulation of acinar cell function and signalling (2008). Olives and Olive Oil In Health and Disease Prevention. Academic Press-Elsevier Book (UK), 1185-1194. ISBN: 978-0-12-374420-3.

Martínez Burgos MA, et al. Lípidos de los alimentos. Libro Blanco de los w3 (2ª Ed.). (2013). Ed. Médica Panamericana, 3-32. ISBN: 978-84-9835-747-9.

## C.3. Projects

Quality of dietary fat: Influence on aerobic capacity and cellular oxidative state. ALI91-1113-C03-02. CICYT. 9,250,000 PTS. 1994-1994. Mr. Mariano Mañas Almendros.

Influence of the modification of membrane lipids by dietary fatty acids on the secretory response and intracellular transduction mechanisms in pancreatic acinar cells in vitro. PB98-1368. MEC (General Directorate for Higher Education and Scientific Research). € 8,500. 1999-2002. Mr. Emilio Martínez de Victoria Muñoz.

Improvement of the Technological Process of Elaboration of Fried Corn. F2102. Ministry of Science and Technology (MCYT). € 7093.80. 2002-2003. : Mr. Ángel Gil Hernández.

Modification of membrane lipids by dietary fatty acids in pancreatic acinar cells. Study of intracellular signaling mechanisms and secretors against different stimuli. BFI2002-02772. MCYT. € 88,550. 2002-2005. Mr. Mariano Mañas Almendros.

European Food Composition Databases and Epidemiological Studies: EuroFIR. FOOD-CT-2005-513944. European Commission's Research Directorate General (Food Quality and Safety Priority, Sixth Framework Program for Research and Technological Development). 2005-2009. Mr. Emilio Martínez de Victoria Muñoz. € 23,940.



Cellular and molecular mechanisms of early cellular damage induced by bile acids and ethanol in pancreatic acinar cells. Modulation by changes in the lipid profile of the membranes (Mode B-UGR). No. 30 PP 008100. University of Granada. € 3,000. 2006-2007. Mr. María Dolores Yago Torregrosa.

Creation of a Spanish Food Composition Database (BDECA Network). FOOD-CT-2005-513944. AESAN. Ministry of Science and Innovation. 2007-2008. Mr. Gaspar Ros Berruezo. € 60,000.

Study of the beneficial effect of functional ingredients of the Mediterranean diet (fatty acids and phenolic compounds) on oxidative-inflammatory processes in an in vitro model of acute pancreatitis. AGL2006-05005 / ALI. MEC. 2006-2009. Mr. Emilio Martínez de Victoria Muñoz. € 42,350.

Food Composition Tables (BDECA Network). AGL2005-24940-E. Ministry of Education and Science (MEC) as a Complementary Action. 2006-2009. Mr. Gaspar Ros Berruezo. € 22,000.

Scientific research aimed at the development of a new generation of food for weight control and prevention of obesity, in the field of gene expression of genes involved in obesity and development of animal models of obesity: PRONAOS Project. 3006-00. Ministry of Science and Innovation. CDTI. 2008-2010. Mr. Emilio Martínez de Victoria Muñoz. Amount: € 12,419,895.00. Subproject 3003-00: € 276,847.00.

The EuroFIR Food Platform: Further development, access and exploitation for its long-term self-sustainability. (EuroFIR-NEXUS). No. 265967. European Union, VII Framework Program and support action (Coordinating). 2011-2013. € 2,200. Paul M. Finglas.

Total Diet Study-Exposure. European Consortium. FP7-KBBE-2011-5; No. 289108. 2010-2016. Mr. Emilio Martínez de Victoria Muñoz until June 2014. Ms. M<sup>a</sup> Alba Martínez Burgos July 2014 until February 2016. € 35,408.

Knowledge platform for assessing the risk of bisphenols on gut microbiota and its role in obesogenic phenotype: looking for biomarkers. OBEMIRISK. GP / EFSA / ENCO / 2018/03. EFSA (European Food Safety Authority). 2019-2021. Mrs. Ana M<sup>a</sup> Rivas Velasco

Study of exposure to bisphenol substitutes to endocrine disruptors in school-age children and its relationship with obesity. Call for Research Grants 2018. Ignacio H. De Larramendi. MAPFRE Foundation. From 02/01/2019 to 02/01/2020. Mrs. Ana M<sup>a</sup> Rivas Velasco.

#### **C.4. Contracts, technological or transfer merits**

Nutritional Assessment of the Andalusian Autonomous Community. C-0866. Andalusian School of Public Health (Ministry of Health, Junta de Andalucía). € 2,760.45. 1996-1997.

Head of the Nutrition and Dietetics area. 05/29506/29. INCOSOL Clinic (Marbella, MÁLAGA). 1997

Head of R + D + i. 107,047. TOSTADEROS SOL DE ALBA, S.A. 2002

Updating and maintenance of the Food and health and Nutrition software programs for educators. Bifarma S.L. Mr. Mariano Mañas Almendros. Mr. Emilio Martínez de Victoria. 2002-indefinite.

#### **C.4. Management**

- Principal Investigator for the University of Granada of the European Project FP-7-TDS-Exposure-KBBE-2011-5; No. 289108, from July 2014 to February 2016.

- Member of Commissions:

a) Teaching Commission (2014-), TFGs Management Commission (2016-), Credit Recognition Commission (2016-), Monitoring Committee for Quality Assurance (2017-), External Practices (2017-) , of the Degree in Biotechnology.

b) Teaching Commission (2010-), TFGs Management Commission (2016-), of the Degree in Biochemistry

c) Teaching Commission of the Department of Physiology from 2009 to date.

d) Member of the INYTA Teaching Commission from 07/01/2009 to 06/07/2013,

- Member and treasurer of the Organizing Committee of the 37th Congress of the Spanish Society of Physiological Sciences (SECF) (2014).

- Member of the Organizing Committee of the 10th International Food Data Conference (2013).

- Member of the Volunteer Committee of the Organization of the IUNS 20th International Congress of Nutrition (2013). Organization of the 17th Congress of The European Chemoreception Research Organization "(2006).

- Member of the Research Group: AGR260 (Food, Nutrition and Health) from 12/01/2010 to date.

- President of the Electoral Board of INYTA, from June 2013 to date

- Member of the Research Group: AGR145 (Digestive Physiology and Nutrition) from 06/07/1995 to 01/11/2010.

- Member of the Institute of Nutrition and Food Technology "José Matáix (INYTA) from 1990 to date.

- Member of International Networks:

International Research Network for the Study of Malnutrition in Ibero-America (MeI-CYTED) ([www.redmei.org](http://www.redmei.org))

Member of the European Network of Excellence EuroFIR and EuroFIR-AISBL ([www.eurofir.org](http://www.eurofir.org)).

- Member of the BEDCA Association (Spanish Database of Food Composition) (<http://www.bedca.net>). BEDCA is registered in the National Registry of Associations: Group 1, Section 1, National Number: 596845. Incorporated under Organic Law 1/2002, of March 22, regulating the Right of Association and under Article 22 of the Spanish constitution.

### C.5. Other merits

- The Institute of Nutrition and Food Technology "José Matáix" (INYTA), of which I am a member, was designated in December 2008 as a "Competent Organization" by the European Food Safety Authority (EFSA) to assist it in tasks such as data collection or scientific-technical support, among others.



- I have carried out the evaluation (review) of journal articles indexed in JCR: Food Chemistry, Journal of Nutrition, Health and Aging, Food and Function, Journal of Medicinal Food, etc.
- Quality Mention: Doctorate Program in Human Nutrition (B.O.E .: 07/14/2004).