Part A. PERSONAL INFORMATION

CV date	20/05/2020

First and Family name	PEDRO ANTONIO CABALLERO CALVO		
Social Security, Passport, ID number		Age	48
Researcher codes	WoS Researcher ID *(*)*	E-3642-2016	
	SCOPUS Author ID*(*)*		
	Open Researcher and Contributor ID (ORCID) **	0000-0003-2285-6128	

(*) At least one of these is mandatory
(**) Mandatory

A.1. Current position

Name of University/Institution	UNIVERSITY OF VALLADOLID			
Department	Department of Agriculture and Forestry Engineering, Food Technology, College of Agricultural and Forestry Engineering			
Address and Country	Av. Madrid, 44, 34004, Palencia, Spain			
Phone number	+34979108493	E-mail	pedroantonio.caballero@uva.es	
Current position	Assistant Professor		From	27/11/2008
Key words	Food Technology, cereal derivatives, breadmaking, physical properties, rheology, gluten-free, food ingredients			

A.2. Education

PhD	University	Year
PhD in Engineering	University of Valladolid	2006

A.3. JCR articles, h Index, thesis supervised…

- Research activity periods positively evaluated: **3** (last period evaluated 2011-2018)
- Teaching activity periods positively evaluated: **4** (last period evaluated 2012-2017)
- Rated Excellent in the evaluation of "Docentia" Programme (96 points out of 100)
- PhD **thesis** supervised (last 10 years): **2** finished and **1** under way
- Supervision of **47** MSc thesis (last 10 years) and **15** Degree Final Projects (last 10 years)
- **Citations** (from Web of Science)
  Total Articles in Publication List: **27 (19 Q1; 8 Q2)**
  Sum of the Times Cited: 1360
  Average Citations per Article: **50,37**
- Chapters in scientific books (volumes): **5**
- Full papers in Conference Proceedings: **36**
- Presentation in Conferences**: 79** (52, international).
- h index: **17** (WOS) **17** (SCOPUS)

Part B. CV SUMMARY *(max. 3500 characters, including spaces)*

The researcher's CV is characterized by a solid academic background in which he has obtained Extraordinary Awards in all his university studies (doctoral studies, Bachelor of Science and Food Technology and Barchelor of Technical Engineering). His professional activity is linked to the Area of Food Technology at the University of Valladolid (UVa) since 1996, having been Assistant Professor since 1997. His research activity has been evaluated positively on three occasions since 1999 by CNEAI, and the University of Valladolid has also evaluated his teaching activity positively on four occasions since 1997. He has obtained an Excellent rating (96 points out of 100) of the teaching activity during the last evaluated period (Docentia Programme).

Since joining the University of Valladolid he has participated in 13 research projects funded in public calls: one international, six national and six regional. He has also worked in numerous projects of knowledge transfer to Industry (71 business contracts). As a result, he has published 35 scientific articles, of which 27 are indexed in the JCR; 79 communications to congresses, of which 52 are international, and 10 books and book chapters. In the last ten years he has directed two doctoral theses already defended and another one in progress; in this period he has also supervised 47 Master Thesis

and 12 Degree Final Projects. The transfer of the results of his research is also reflected in the obtaining of two Spanish patents and one Utility Model, which he is about to transfer to Food industry. His current research activity is focused on the study of novel food ingredients (mainly cereals and pseudocereals) from a physical, chemical, functional and nutritional point of view, to identify their suitability for the development of nutritionally improved cereal products suitable for populations with special needs like celiacs or patients with dysphagia. In order to develop this activity he is also integrated in ProcerealTech research group, recognized as a Consolidated Research Unit by the Junta de Castilla y León at June 2017. In that group he is expert in the measurement of physical properties, rheological properties of doughs and gels, and the characterization of quality of baked products. Currently, he is responsible for a research line aimed at the treatment of cereal grains and pseudocereals with high hydrostatic pressures as a strategy to improve the quality and nutritional value of gluten-free products.

At present, the researcher leads the Research Group Food Industry Technology: Cereals and Derivatives (recognised by the University of Valladolid) and is the President of the Association of Food Scientists and Technologists of Castilla y León (ACTA/CL). He also has experience in the management of research activities such as the direction of the Agricultural and Food Industries Unit in the R+D+i Area of Agrarian and Agri-Food Technology Centre (ITAGRA.ct). His activity is completed with a continuous dedication to the activities of academic management in the UVa, having been Vice-Rector of Palencia Campus of University of Valladolid (2010-2014) and Academic Secretary of Higher Technical School of Agricultural Engineering (University of Valladolid) (2008-2010), among other positions.

Part C. RELEVANT MERITS

C.1. Publications (including books) (10 selected papers of the period 2009-2019)

- S. Pérez-Quirce; **P.A. Caballero**; A. J. Vela; M. Villanueva, F. Ronda (2018) Impact of yeast and fungi (1→3)(1→6)-β-glucan concentrates on viscoelastic behavior and bread making performance of gluten-free rice-based doughs. Food Hydrocolloids 79, 382-390. Cuartil Q1. https://doi.org/10.1016/j.foodhyd.2018.01.004
- **Caballero, P.A.** (2017). Stabilizing, thickening and gelling additives. In Mateos-Aparicio, I. (Ed.). Aditivos Alimentarios. Dextra Editorial, Madrid (Spain)
- De la Hera, E.; Talegón, M.; **Caballero, P.A**.; Gómez, M. (2013) Influence of maize flour particle size on gluten-free bread-making. Journal of the Science of Food and Agriculture, 93:924-932. Cuartil Q2. https://doi.org/10.1002/jsfa.5826
- Ronda, F.; Rivero, P.; **Caballero, P.A**.; Quilez, J. (2012). High insoluble fiber content increases in vitro starch digestibility in partially baked breads. International Journal of Food Sciences and Nutrition. 63 (8):971-977. Cuartil Q2. https://doi.org/10.3109/09637486.2012.690025
- Ronda, F.; Oliete, B.; Gómez, M.; **Caballero, P.A**.; Pando, V. (2011) Rheological study of layer cake batters made with soybean protein isolate and different starch sources. Journal of Food Engineering, 102:272-277. Cuartil Q1. https://doi.org/10.1016/j.jfoodeng.2010.09.001
- Ronda, F.; **Caballero, P.A**.; Quilez, J.; Roos, Y.H. (2011). Staling of frozen partly and fully baked breads. Study of the combined effect of amylopectin recrystallization and water content on bread firmness. Journal of Cereal Science. 53 (1): 97-103. Cuartil Q1. https://doi.org/10.1016/j.jcs.2010.10.003
- Gómez, M.; Manchón, L.; Oliete, B.; Ruiz-Paris, E.; **Caballero, P.A.** (2010) Adequacy of wholegrain non-wheat flours for layer cake elaboration. LWT- Food Science and Technology, 43:507-513. Cuartil Q1. https://doi.org/10.1016/j.lwt.2009.09.019
- Gómez, M.; Moraleja, A,; Oliete, B.; Ruiz-Paris, E.; **Caballero, P.A.** (2010) Effect of fibre size on the quality of fibre-enriched layer cakes. LWT- Food Science and Technology, 43:33-38. Cuartil Q1. https://doi.org/10.1016/j.lwt.2009.06.026
- Ronda, F.; Gómez, M.; **Caballero, P.A.;** Oliete, B.; Blanco, C.A. (2009) Gluten-Free Layer Cakes Quality Improvement. Food Science and Technology International, 15:193-202. Cuartil Q1. https://doi.org/10.1177/1082013208105170
- Gómez, M.; Pardo, J.; Oliete, B.; **Caballero, P.A.;** (2009) Effect of the milling process on quality characteristics of rye flour. Journal Of The Science of Food and Agriculture1 89 (3): 470-476. Cuartil Q2. https://doi.org/10.1002/jsfa.3475

C.2. Research projects and grants (10 last years)

- Innovative treatment of cereal grains and pseudocereals with high hydrostatic pressures as a strategy to improve the quality and nutritional value of gluten-free products. **Regional Ministry of Education (CYL)/FEDER** (**VA165G18**). Leading Researcher: **P.A. Caballero**. Period: 2018-2020 (3 years). Project cost: €12000.
- Impact of microwave and ultrasound on gluten-free flours functionality: structuring ability in gluten-free breadmaking matrices Ministry of Economy and Competitiveness (**MINECO/FEDER**) (**AGL2015-63849-C2-2-R**). Leading Researcher: **F. Ronda**. Period: 2016-2020 (4 years); Project Cost: 84000 €
- Nutritional and functional improvement of gluten-free breads: addition of beta-glucans of different origins and molecular weights according to the health claims approved by the EFSAMinistry of Economy and Competitiveness (**MINECO/FEDER**) (**Ref: AGL2012-35088**). Leading Researcher: **F. Ronda**. Period: 2013-2015 (3 years); Project Cost: 76.050 €
- Application of electromagnetic waves to gluten-free flours to adapt its structure and functionality to the needs of the food industry. Development of better quality products. **Regional Ministry of Education (CYL)/FEDER** (**VA-072P17**). Leading Researcher: **F. Ronda**. Period: 2017-2019 (3 years). Project cost: €120000.
- Combination of enzymatic treatments and extrusion to modify the functional properties of flours. **Regional Ministry of Education (Ref: VA054A12-2)** Leading Researcher: M. Gómez**.** Period: 2012-2014. Project Cost: 30.000 €.
- Gluten-free bread making by incorporating structured protein networks (exogenous) and its impact on starch digestibility. **Regional Ministry of Education (Ref: VA 252A12-2)** Leading Researcher: **F.Ronda.** Period: 2012-2013. Project Cost: 30.000 €.
- Increasing the shelf life of gluten-free bread by means of freezing processes. **Regional Ministry of Education** (**VA 067A08**). Leading Researcher: **F. Ronda.** Period: 2008-2010 (3 years). Project Cost: 11.100 €.
- Recovery of traditional varieties of wheat for its use in Castilla y Leon breads and bakery products. **Castilla y Leon Regional Ministry (Ref: VA-11-C2-1).** Leading Researcher: M. Gómez. Period: 29/05/2007-28/5/2010 (3 years). Project Cost: 46.000€.

C.3. Contracts (10 last years)

- Applicability of physical treatments to improve the baking properties of non-baking wheat. Leading Researchers: **F. Ronda, P.A. Caballero**; Company: ADDIMENT (Mexico) representing to Grupo Bimbo (Mexico). Period: 2019 (3 months). 6354 €
- Agreement for the promotion of the innovation and knowledge transfer on food products and optimise production processes in strategic sectors in Castilla y León: The flour sector. Leading researchers: **P.A. Caballero, F. Ronda.** Instituto Tecnológico Agrario de Castilla y León (ITACYL) and the Fundación Parque Científico of the Universidad de Valladolid. Period: 2018-2020 (2 years). 96.915 €.
- Study of the transformation of the canaryseed *(Phalaris canariensis, L.*) as a tool for rural development in the province of Palencia" (Winner of the second prize of the Diputación de Palencia "Generando Valor Rural Provincia de Palencia" 2017). Leading researcher: **P.A. Caballero**. Company; Fitopal S.L. 2017-2018 (6 moths) 9680€
- Optimisation of natural pistachio pre-treatment and packaging processes. (Winner of the first prize of the Diputación de Valladolid rural entrepreneurship innovation). Leading researcher: **P.A. Caballero**. Company; Pistacyl S.L. 2017 (5 moths) 8000€
- Enrichment of Breads with cereal β-Glucans. Project Director: **F.Ronda;** Company: Biofactoría Naturae Salus S.A. Period: 2016 (1 month). Project Cost: 2100 €.
- Study of the technological characteristics of different cultivars of *Fagopyrum esculentum, M.* and the use of its flour as a raw material in the production of gluten-free foods. Leading researcher: **P.A. Caballero**. Company: CIFA Cantabria. 2011 (7 moths) 3840 €
- Study of the agri-food transformation of the different cultivars of *Fagopyrum esculentum M.* and the use of the flour obtained as raw material in the production of products suitable for the celiac population. Leading researcher: **P.A. Caballero**. Company CIFA Cantabria. 2010 (6 moths) 1620€
- Effect of processing and composition of frozen part-baked bread on the quality of the final product.

Project Director: **F.Ronda**. Company: Europastry, S.A. Period: 2010 (4 months). Project Cost: 2000 €

- Research and Healthy Food Ingredients. Project Director: M. Gómez. Company: Galletas Siro, S.A. Period: 2009-2011 (2.5 years). Project Cost: 286000 €

C.4. Patents (10 last years)

Patent: RICE FLOUR MODIFIED BY HYDROTHERMAL MICROWAVE TREATMENT, METHOD OF PRODUCTION AND USES. **Ronda, F**., Villanueva, M., Harasym, J., Muñoz, J.M., **Caballero, P.A.,** Pérez-Quirce, S. National scope. Nº 201830851 (3). 29/08/2018.

Utility model: FOOD PRODUCT ADAPTED FOR PATIENTS WITH DYSPHAGIA (Producto alimenticio adaptado y listo para consumir para pacientes con disfagia). **Caballero, P.A.,** Ronda F., Villanueva, M., Harasym J. Arratibel, A. Nº U201831386, 14/7/2018.

Patent: EQUIPMENT AND PROCEDURE FOR BAKING FOOD PRODUCTS VARYING PRESSURE. Gómez, M.; **Caballero, P.A.,** Oliete, B. National scope. ES 2 320 297 A1. 20/05/2009.

C.5 Institutional responsibilities (10 last years):

- President of the Association of Food Scientists and Technologists of Castilla y León (ACTA/CL) (2013-to the present)
- Director of Research Group Food Industry Technology: Cereals and Derivatives (recognised by the University of Valladolid) (2017-to the present)
- Vice-Rector of Palencia Campus of University of Valladolid (2010-2014)
- Director of the University Barchelor Degree in "Agricultural and Food Industry Engineering" of the Higher Technical School of Agricultural Engineering (University of Valladolid) (2009-2010).
- Director of the Agricultural and Food Industries Unit in the R+D+i Area of Agrarian and Agri-Food Technology Centre (ITAGRA.ct, Palencia, Spain) (2008-2010).
- Academic Secretary of Higher Technical School of Agricultural Engineering (University of Valladolid) (2008-2010)
- Academic Secretary of Department of Agricultural and Forestry Engineering (University of Valladolid (1999-2008)
- Director of the Food Technology Area of University of Valladolid (1999-2005).

C.6. Research Stays Abroad (10 last years):

- Wroclaw University of Economics (Poland), Adaptive Food Systems Accelerator Research Centre, with Prof. J. Harasym, 2019, (1 month)

C.7. Evaluation Activities:

- Editorial Board Member of FOODS ((ISSN 2304-8158; MDPI Open Access Journal)
- Reviewer of Scientific Journals (SCI): Applied Microbiology and Biotechnology, Journal of Cereal Science, Food Science and Technology International, European Food Research and Technology, Cereal Chemistry, Ciencia y Tecnología Alimentaria, Journal of Food Biochemistry, Food Chemistry.
- Reviewer of Research, Development and Innovation Projects (R+D+i) in the context of RD 1432/2003 (Spanish Ministry of Science and Technology) for different certification companies since 2009: AENOR, ACERTA, DNV GL-Business Assurance, OCA-CERT-Instituto de Certificación and European Quality Assurance (EQA) (**42** projects evaluated in the last 10 years).