


IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website

Part A. PERSONAL INFORMATION

		CV date	25/07/2023
First name	Ana Belén		
Family name	Martin Diana		
Gender (*)	Female	Birth date	21/05/1973
ID number	02250161W		
e-mail	mardiaan@itacyl.es	www.researchgate.net/profile/Ana-Martin-Diana	
ORCID CODE-0000-0001-5014-9848.			
RESEARCH ID-8840200400			

A.1. Current position

Position	Senior Researcher		
Initial date	01/10/2009		
Institution	Agrarian Technological Institute of Castilla and Leon (ITACyL).		
Department/Center	Area of Innovation and Process Optimization		
Country	Spain	Teleph.	0034983410366
Key words	Nutraceuticals, Functional Foods, Bioactive compounds		

A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
10/10/2022-nowadays	Permanent Senior Researcher and Head of Area of Innovation. Agro Technological Institute-ITACyL. Valladolid, Spain.
26/03/2014-10/10/2022	Permanent Senior Researcher. Agro Technological Institute-ITACyL. Valladolid, Spain.
01/09/2013/26/03/2014 (voluntary leave)	Permanent Lecturer. Dublin Institute of Technology (DIT actual TU Dublin). Dublin, Ireland.
21/03/2012 to 01/09/2013 (voluntary leave)	Permanent. Senior Researcher. Agro Technological Institute-ITACyL. Valladolid Spain.
01/10/2009 to 21/03/2012	Deputy of Research. Agro Technological Institute-ITACyL. Valladolid, Spain.
01//09/2008 to 01/10/2009 (voluntary leave)	Permanent Lecturer. Dublin Institute of Technology (DIT actual TU Dublin). Dublin, Ireland.
31/12/2006 to 01/09/2008	Senior Postdoctoral and Profesor Asociado Dublin Institute of Technology (DIT actual TUD). Dublin, Ireland.
01/05/2005 to 01/09/2005	Invite Lecturer/Researcher. Universidad Politécnica de Valencia (UPV). Valencia, Spain.
01/01/2003 to 31/12/2006	Postdoctoral (Arnold Graves) and Part-time Lecturer Dublin Institute of Technology (DIT actual TUD). Dublin, Ireland.
01/01/2002 to 01/01/2003	Postdoctoral. Consejo Superior de Investigaciones. Científicas (CSIC). Madrid. Spain.
01/09/1998 to 01/01/2002	Predocctoral. Consejo Superior de Investigaciones. Científicas (CSIC). Madrid. España.
01/09/1997 to 01/09/1998	Predocctoral. Universidad Complutense de Madrid (UMC). Facultad de Farmacia. Madrid, España.
01/05/1997 to 01/06/1997	Investigador invitado. University Hospital of Wales. Reino Unido
01/05/1996 to 01/09/1997	Predocctoral. Hospital Universitario Clínico San Carlos. Universidad Complutense de Madrid (UMC). Madrid, España.

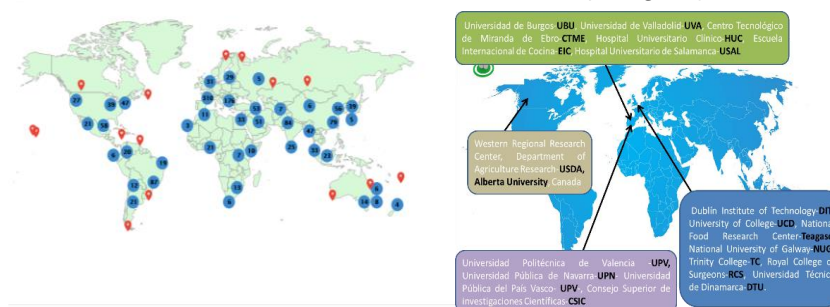
A.3. Education

PhD, Licensed, Graduate	University/Country	Year
BSc. In Biology	Universidad Complutense de Madrid. Spain	1996
PhD in Biology (Biochemistry and Molecular Biology)	Universidad Complutense de Madrid. Spain	2002

Part B. CV SUMMARY

Dr. Martin-Diana is BSc. In Biology and PhD in Biochemistry and Molecular Biology by University Complutense Madrid-UCM (Madrid, Spain). She has an extensive experience (26 years) working in research the field of Pharma, Nutrition and Food Technology Science in the extraction and characterisation of bioactive compounds from food and by-products, characterization and evaluation of health-related properties with special interest on antioxidant, antihypertensive, anti-inflammatory and anti-thrombotic properties through the use of *in vitro* analysis. Dr. Martin-Diana has participated as Coordinator/IP and Researcher in 42 projects funded with international (European Regional Development Fund, European Agricultural Fund for Rural Development, Interreg VA Spain-Portugal-POCTEP, Irish government competitive funds administered by the Department of Education and Skills, the Higher Education Authority, Science foundation Ireland and others), national (Spanish government- MINECO, MICIN, AEI) and industrial funds through Centro para el Desarrollo Tecnologic y la Innovación-CDTI, Instituto para la Competitividad Empresarial de Castilla y León or Interprise Ireland). Author of 176 research papers, 127 SCI peer review, with 4198 citations in 3646 documents with impact worldwide (Image 1) and with H index 30 (Scopus) and H index 31 (Researchgate). Five papers have been on the top 25 on Science Direct. Dr. Martin-Diana has worked at national level in Diabetology Department in San Carlos Hospital- UCM, Pharmaceutical Faculty-UCM, Superior Council of Research of Spain-CSIC (Madrid, Spain), University Polytechnic of Valencia (UPV) and Agro Technological Institute-ITACyL. Valladolid, Spain. At international level in High Hospital of Wales (UK), Dublin Institute of Technology-DIT (Ireland). Her experience and career allow to establish a national, international network (Image 1).

Image 1. Dr. Martin-Diana Geographic Citation Map (left) and Collaborative network (right). Source Web of Science (Clarivate).



Starting her research in biochemistry and nutrition field (nutraceuticals) investigating the molecular basis to explain

the pre-metabolic syndrome (diabetes, obesity and cardiovascular diseases) focused in the insulin, pro-insulin, leptin and CTLA-4 as main markers of the study. And focusing later her research area on the development of functional ingredients and functional foods using by-products as source of valuable raw materials which contribute to reduce the incidence of chronic diseases. The use of novel technological strategies (High hydrostatic pressure, extrusion, germination, ultrafiltration, hydrothermal treatments, atomization, enzymatic hydrolysis among others) and the use of *in vitro* analysis (antioxidant, antihypertensive, anti-inflammatory and anti-thrombotic properties) have been the main pillar of her research during these years and contribute to the scientific community and industrial and society for the direct application of her projects. She counts with two industrial licences at the moment. In 2002 obtained two postdoctoral grants, one from Spanish government associated to Cambridge University (United Kingdom) and the other grant by Irish government (Arnold Graves a grant for recognised talent attraction researchers). Member of Agencia Española de Seguridad Alimentaria y Nutrición (2014-2019), and member of evaluation scientific committees such as ANEP, DEVA, INIA. Member of Editorial of Journal of Chemistry and Molecules (MDPI). Member of Irish Phyto Network y Nutrisalud (INIA). She has supervised 8 PhD thesis, 8 TFM and 9 TFG. And participate actively in divulgation of science thorough with primary, secondary schools, Minsiterio de Igualdad (Programa ADA). She has management research in Ireland leading two research Units (PTA and FIFU), Deputy Research in ITACyL and actually Head of of Area of Innovation and Process Optimization positions which are combined with her research activity.

Part C. RELEVANT MERITS

C.1. Publications. 165 research papers, 116 SCI peer review below appears due to reduce space some papers with most relevance for the proposal from last 5 years.

- Jimenez Pulido, I.J., Rico, D., Perez Jimenez, J., Martinez Villaluenga, C., De Luis, D., Martin Diana, A.B. Sprouting and Hydrolysis as Biotechnological Tools for Development of



- Nutraceutical. Ingredients from Oat Grain and Hull. *Foods*. (2022) 11 - 1, 2769 - 2793. doi: 10.3390/foods11182769.
- Jimenez Pulido, I.J., Rico, D., Perez Jimenez, J., Martinez Villaluenga, C., De Luis, D., Martin Diana, A.B. Impact of Protein Content on the Antioxidants, Anti-Inflammatory Properties and Glycemic Index of Wheat and Wheat Bran. *Foods*. (2022) 11 - 1, 2049 - 2069. doi: 10.3390/foods11142049
 - Angel L Gutierrez; Daniel Rico; Felicidad Ronda; Ana Belen Martin-Diana; Pedro A. Caballero. Development of a gluten-free whole grain flour by combining soaking and high hydrostatic pressure treatments for enhancing functional, nutritional and bioactive properties. *Journal of Cereal Science*. (2022) 105, 103458. doi.org/10.1016/j.jcs.2022.103458.
 - Tome-Sanchez, I.; Martin-Diana, A.B.; Peñas, E.; Frias, J.; Rico, D.; Jimenez-Pulido, I.; Martinez-Villaluenga, C. Bioprocessed Wheat Ingredients: Characterization, Bioaccessibility of Phenolic Compounds, and Bioactivity During *in vitro* Digestion. *Frontiers in Plant Science*. (2021) 12, 790898. doi: 10.3389/fpls.2021.790898.
 - Rico, D.; Peñas, E.; Garcia, M.C.; Rai, D.K.; Martinez-Villaluenga, C.; Frias, J.; Martin-Diana, A.B. Development of Antioxidant and Nutritious Lentil (*Lens culinaris*) Flour Using Controlled Optimized Germination as a Bioprocess. *Foods*. (2022) 10, 2924. doi: 10.3390/foods10122924.
 - Rico, D.; Cano, A.B.; Martin-Diana, A.B. Pulse-Cereal Blend Extrusion for Improving the Antioxidant Properties of a Gluten-Free Flour. *Molecules*. (2021). 26, 5578. doi: 10.3390/molecules26185578
 - Martín-Diana, A.B, Tomé-Sánchez I, García-Casas MJ, Martínez-Villaluenga C, Frías J, Rico D. A Novel Strategy to Produce a Soluble and Bioactive Wheat Bran Ingredient Rich in Ferulic Acid. *Antioxidants (Basel)*. (2021). 16, 10(6):969. doi: 10.3390/antiox10060969.
 - Martín-Diana AB, García-Casas MJ, Martínez-Villaluenga C, Frías J, Peñas E, Rico D. Wheat and Oat Brans as Sources of Polyphenol Compounds for Development of Antioxidant Nutraceutical Ingredients. *Foods*. (2021). 7, 10(1), 115. doi: 10.3390/foods10010115.
 - Rico D, Albertos I, Martinez-Alvarez O, Lopez-Caballero ME, Martin-Diana AB. Use of Sea Fennel as a Natural Ingredient of Edible Films for Extending the Shelf Life of Fresh Fish Burgers. *Molecules*. (2020)11, 25(22):5260. doi: 10.3390/molecules25225260.
 - Bautista-Expósito S, Tomé-Sánchez I, Martín-Diana AB, Frias J, Peñas E, Rico D, Casas MJG, Martínez-Villaluenga C. Enzyme Selection and Hydrolysis under Optimal Conditions Improved Phenolic Acid Solubility, and Antioxidant and Anti-Inflammatory Activities of Wheat Bran. *Antioxidants*. (2020). 13, 9(10), 984. doi: 10.3390/antiox9100984.
 - Rico, D.; Villaverde, A.; Martinez-Villaluenga, C.; Gutierrez, A.L.; Caballero, P.A.; Ronda, F.; Peñas, E.; Frias, J.; Martin Diana, A.B. Application of Autoclave Treatment for Development of a Natural Wheat Bran Antioxidant Ingredient. *Foods*. (2020). 9, 781. <https://doi.org/10.3390/foods9060781>.
 - Rico, D., Martínez-Villaluenga, C., Asensio, C., Miranda, J., De Luis, D. and Martín-Diana, A.B. Carob by-products and seaweeds for the development of functional bread. *Journal of Food Processing and Preservation* (2018) DOI: 10.1111/jfpp.13700
 - Del Pino-García, R., Rico, D., Martín-Diana, A.B. Evaluation of bioactive properties of *Vicia narbonensis* L. as potential flour ingredient for gluten-free food industry. *Journal of Functional Foods* (2018). 47, 172-183. doi: 10.1016/j.jff.2018.05.049
 - Rico, D., Diana, A.B.M., Milton-Laskibar, I., Fernández-Quintela, A., Silván, J.M., Rai, D.K., Choudhary, A., Peñas, E., de Luis, D.A., Martínez-Villaluenga, C. Characterization and *in vitro* evaluation of seaweed species as potential functional ingredients to ameliorate metabolic syndrome. *Journal of Functional Foods*. (2018). 46, 85-194. doi:10.1016/j.jff.2018.05.010.
 - García-González, N., Asensio-Vegas, C., Rico, D., Olmedilla-Alonso, B., Nova, E., Peñas, E., Martín-Diana, A.B. Antioxidant Properties of Ewe versus Cow Yogurt and Effect of Its Consumption on Cortisol Levels of Adults (Borderline-high Cholesterol Levels). *Journal of Food and Nutrition Research* (2018). 6(6), 346-355. doi:10.12691/jfnr-6-6-1.
 - Asensio-Vegas, C., Tiwari, B., Gredilla, A.E., Bueno, F., Delgado, D., Martín-Diana, A.B. Development of yoghurt from ovine milk with enhanced texture and flavour properties.



International Journal of Dairy Technology (2018). 71 (1),112-121. Doi:10.1111/1471-0307.12341.

C.2. Congress, indicating the modality of their participation (invited conference, oral presentation, poster). Author has contributed in 158 communications to national and international congress due to the reduce space only mentioned some corresponding to 2022.

- Jimenez-Pulido, I.J., Rico, D., Pérez-Jiménez J., de Luis, D., Peñas, E., Martínez-Villaluenga, C. and Martín-Diana, A.B. Germination as a green biotechnological process to enhance the nutritional and bioactive profile of oat grains. 36th EFFoST International Conference 2022. 7-10 November. Dublin, Ireland. Poster Presentation.
- Innovative fruit-based products to increase fruit consumption, promote health and reduce food waste. Abadias, M., Rico, D., Martín-Diana, A.B., Aguiló-Aguayo, I. International Horticultural Congress 14-20 August. Angers, France. Poster Presentation.
- Application of short-time high hydrostatic pressure treatments to whole buckwheat grains to modulate the functional properties of the resulting flours. Gutiérrez, A.L., Padrones, I.C., Rico, D., Ronda, F., Martín-Diana, A.B. Trends in grain-based Foods. 20220, 23 - 25 March. 2022. Braganza, Portugal. Poster Presentation.

C.3. Research projects Author has participated in 42 projects bellow those with high relevance for the last 5 years.

- PID2019-104269RR-C32. Desarrollo de productos de fruta innovadores para incrementar su consumo, promover la salud y reducir residuos agroalimentarios. ALLFORFRUIT. Funding: MINECO RETOS. IP: Daniel Rico (ITACyL). Dates: 2020-2023. Budget: 98.010 €. Role: IP ITACyL
- PEP-2020-712. Aplicación de *machine learning* como herramienta para la predicción de las propiedades saludables y sensoriales en procesos industriales. FOODTOOL. Funding: FEDER. IP: Ana Belén Martín Diana. Dates: 2020-2023. Budget: 325.797 €. Role: IP.
- Re-industrialización del sector agroalimentario- Sostenibilidad e Innovación. Entidad/es financiadora/s: POCTEP. Duración, desde: 2019-2022.
- AGL2017-83718R. Valorization of whole grains for the development of immunomodulatory foods aimed at oncohematological patients (CEREALS4HEALTH). Funding: MINECO. Call: RETOS. IP: C.M. Villaluenga (ICTAN-CSIC). Dates: 2018-2020. Budget: 223.850 € Role: IP ITACyL.
- PEP-2018-807. Development of improved techno-functional flours for the preparation of healthy products (BIODOUGH). Funding: FEADER and Consejería de Agricultura y Ganadería de Castilla y León. IP: Daniel Rico. Dates: 2017-2020. Budget: 599.892 €. Role: Research team.
- RTA2014-00037-C02. Preparation of new generation snacks incorporating algae and carob to improve the risk factors of the metabolic syndrome (ALGASNACK). Funding: INIA. Call: RTA. IP: Daniel Rico (ITACyL). Dates: 2016-2020. Budget: 240.000 €. Role: Research team.
- PEP-2011-513. Development of new high-value extruded products (SNACK SALUDABLE). Funding: Consejería de Agricultura y Ganadería de Castilla y León. IP: Daniel Rico (ITACyL). Dates: 2011-2018. Budget: 148.321 €. Role: Research team.

C.4. Contracts, technological or transfer merits. Following some industrial contracts and patents.

- Title: “Uso de cáñamo y sus subproductos para el desarrollo de productos alimentarios” Hempfood. Company: Pelletsolution. IP: Ana B. Martín-Diana (ITACyL). Dates:2021-2023. Cost:12.000 €.
- Title: “Development of packaging for extending the shelflife of high oleic sunflower seed” Company: CECOSA. IP: Ana B. Martín-Diana (ITACyL). Dates:2018-2019. Cost:4.000 €.
- Title: “Industrial R&D project for the development of new processes and natural products from fruits and vegetables without preservatives”. Company: NATURAE-ET-SALUS. IP: Ana B. Martín-Diana. Dates: 2017-2018. Cost: 20.000 €.
- Title: “Development of novel flours using cereal grains germinated. ESPROGER”. Company: Emilio Esteban S.A. IP: Daniel Rico (ITACyL). Dates:2016-2017.Cost:70.000 €.
- Patent. Massini, L., Martín-Diana, A.B., Rico, D., y Barry-Ryan, C. Technological licenc: Antioxidant Rich Food Ingredients. N.: T-11-043. Dublin Institute of Technology, Ireland.
- Patent. Rico, D., Martín-Diana, A.B., Albertos, I. Procedimiento de fabricación de un aperitivo (snack) hortofrutícola. N. de solicitud: 2015/8766. Itacyl, Spain.