

<b>CV Date</b>	15/05/2023
----------------	------------

## Part A. PERSONAL INFORMATION

First Name *	David		
Family Name *	Bernardo Ordiz		
Sex *	Male	Date of Birth *	01/09/1980
ID number Social Security, Passport *		Phone Number *	(+34) 983185978
URL Web	<a href="http://www.ibgm.med.uva.es/investigacion/inmunidad-innata-e-inflamacion/alergia-e-inmunidad-de-mucosas/">http://www.ibgm.med.uva.es/investigacion/inmunidad-innata-e-inflamacion/alergia-e-inmunidad-de-mucosas/</a>		
Email Address	d.bernardo.ordiz@gmail.com		
Researcher's identification number	Open Researcher and Contributor ID (ORCID) *	0000-0002-2843-6696	
	Researcher ID		
	Scopus Author ID	16836282400	

\* Mandatory

### A.1. Current position

Job Title	Ramón y Cajal Research Fellow		
Starting date	2019		
Institution	Universidad de Valladolid		
Department / Centre			
Country	Spain	Phone Number	
Keywords	Cell culture; Tissue culture; Clinical biology		

### A.2. Previous positions

Period	Job Title / Name of Employer / Country
2015 - 2019	Head of the IBD Unit Research Lab / FUNDACION PARA LA INVESTIGACION BIOMEDICA DEL HOSPITAL UNIVERSITARIO "LA PRINCESA" / Spain
2011 - 2015	Research Associate / Imperial College London / United Kingdom
2010 - 2011	Visiting Researcher / Open University / United Kingdom
2009 - 2011	Marie Curie Research Fellow / Imperial College London / United Kingdom
2008 - 2009	Research Associate / Instituto de Biología y Genética Molecular / Spain
2005 - 2008	PhD student / Instituto de Biología y Genética Molecular / Spain
2006 - 2006	Visiting researcher / Vrije Universiteit Medisch Centrum / Holland
2002 - 2004	PhD student / Universidad de Oviedo / Spain
2002 - 2002	Trainee student / Servicio Regional de Investigación y Desarrollo Agroalimentario / Spain
2001 - 2002	Internal student / Universidad de Oviedo / Spain

### A.3. Education

Degree/Master/PhD	University / Country	Year
Dr Pediatría e Inmunología	Universidad de Valladolid / Spain	2008
Experto Universitario en Estadística Avanzada y en métodos robustos y de remuestreo	Universidad Nacional de Educación a Distancia	2007
Licenciado en Biología Especialidad Biología Fundamental	Universidad de Oviedo / Spain	2002

## Part B. CV SUMMARY

I obtained my PhD in coeliac disease (CD) immunology at University of Valladolid (Spain, 2008). On my first Postdoc, performed on the same research facilities for a period of 1 year, I organized and supervised projects of 3 PhD students based on original findings developed through my PhD proving my independent thinking and organizational and supervision skills from very early on my career. In 2009, I moved to Imperial College London (UK) to further develop my career with a Marie Curie Research Fellowship in the lab of Prof Stella C. Knight, a world-renowned authority in human mucosal immunology. There, I specialized on the human intestinal immune system (2009-2015) by flow cytometry. My formation was complemented from the clinical side in the context of human inflammatory bowel disease (IBD) as I interacted on a daily basis with Prof Ailsa L Hart, head of the IBD Unit at St Mark's Hospital (London's referral Hospital in IBD), acquiring therefore an integral translational background in the study of IBD which revealed me as a precious asset for any translational IBD unit over Europe.

In 2015 I decided to incorporate as the Head of the Research Laboratory from the IBD Unit, directed by Dr Javier P. Gisbert (a world-referral clinician on the study of this pathology) at La Princesa Hospital Research Institute & CIBERehd (Madrid, Spain). My main research line was focused on the study of the human intestinal immune system in health, and how changes on its properties were related with IBD progression as the altered function of the immune system is key in IBD pathogenesis. There, I managed to develop a brand new Research Laboratory from scratch which allowed me to publish several original research manuscripts on the topic. As a consequence, in 2019 I was awarded with a Ramón y Cajal tenure track which allowed me to establish myself as an independent PI at the Institute Biomedicine and Molecular Genetics (IBGM) at University of Valladolid, leading me to obtain the I3 (I3/2021/1392).

The quality of my organization and project management skills are proven by my capacity to establish and maintain an active network which allowed me to publish original research articles in 6 different laboratories, in 3 different countries, where I have worked (Spain, 2001/9; the Netherlands, 2006; UK 2009/2015; and Spain since 2015), showing my ability to be flexible and well organized in my approaches to research. To date, I have over 100 published peer-reviewed SCI publications (h-index 29, according to Scopus; h-index 38 according to Google Scholar), 8 book chapters, 3 non-indexed publications and 3 PCT patents. I have been awarded twice as best communication in a conference and performed 26 invited talks (USA, Spain, UK and Norway). I was selected to attend the 60th Meeting of Nobel Laureates in Lindau (Germany) in 2010. I have been recognized as a Bright Spark in Immunology by the British Society for Immunology (2013), as a Mentee by the Society for Mucosal Immunology (2017) and as a Rising Star by the "Sociedad Española de Patología Digestiva" (2021). I am reviewer of 20 and editor of 6 indexed peer-reviewed journals, member of 8 scientific societies, have reviewed projects for several national and international organizations and have been external reviewer/examiner of 20 PhD dissertations.

As a PI, I have obtained funds from the Spanish Government (Proyectos Retos Jovenes Investigadores, Proyectos Retos), CSIC, Junta de Castilla y León, Asociación Española de Gastroenterología, Grupo Español de Trabajo en Enfermedad de Crohn y Colitis Ulcerosa, Asociación Castellana de Aparato Digestivo, Comunidad de Madrid, Federación de Asociaciones de Celiacos de España, University of Valladolid and the industry (MSD, Spherium Biomed, Janssen and Pfizer). Indeed, since I established myself as a PI at IBGM in 2019 I have obtained over 2,5 Million € proving my capacity to run an independent research lab where I am currently supervising the work of 2 postdocs, 5 PhD students and a research technician. Hence, we are currently leading several projects on CD and provide clinical support at two hospitals for CD diagnose, being also myself a member of the Counselling board of the Spanish Society of CD. Moreover, I am also on the Executive Committee of the National PTI SALUD GLOBAL+ (since 2021) and National Coordinator and Head of its WP5: IMMUNE, where I supervise the work of 25 research groups (together with María Montoya) with a budget over 5 Million €.

Finally. I am also involved in public engagement activities being scientific advisor of several coeliac patient associations (including Coeliac UK and several Spanish societies), having written 5 lay articles in non-scientific journals, performed lay format lectures, and being the coordinator of a science divulgation blog where I also provide original posts ([www.dciencia.es](http://www.dciencia.es)) and having published lay articles in several media (The Conversation, Huffington Post, InnovaSpain, etc.).

## Part C. RELEVANT ACCOMPLISHMENTS

### C.1. Publications

AC: corresponding author. (n° x / n° y): position / total authors. If applicable, indicate the number of citations

- 1 **Scientific paper**. E Arribas-Rodríguez; L Fernández-Salazar; B de Andrés; E Arranz; JA Garrote; D Bernardo (AC). (6/6). 2023. Study and isolation of human intestinal dendritic cell and macrophage subsets. *Methods in Cell Biology*. In press.
- 2 **Scientific paper**. P Mondelo-Macía; L León-Mateos; D Bernardo; R Díaz-Peña. (6/6). 2023. Top-of-the-art cytometry as novel tools to aid in lung cancer immunotherapy. *Translational Lung Cancer Research*. In press.
- 3 **Scientific paper**. COVID-19 Host Genetics Initiative (David Bernardo is a Member). 2022. A first update on mapping the human genetic architecture of COVID-19. *Nature*. doi: 10.1038/s41586-.
- 4 **Scientific paper**. CM González-Casimiro; E Arribas-Rodríguez; A Fiz-López; et al; D Bernardo (AC). (13/13). 2022. Altered surface expression of insulin-degrading enzyme on monocytes and lymphocytes from COVID-19 patients both at diagnosis and after hospital discharge. *Int. J. Mol. Sci.* pp.<https://doi.org/10.3390/ijms231911070>.
- 5 **Scientific paper**. I Soletto; S Fernández-Tomé S; I Mora-Gutiérrez; et al; D Bernardo (AC). (14/14). 2022. Differential Effects of Anti-TNF $\alpha$  and Anti- $\alpha$ 4 $\beta$ 7 Drugs on Circulating Dendritic Cells Migratory Capacity in Inflammatory Bowel Disease. *Biomedicine*. doi: 10.3390/biomed.
- 6 **Scientific paper**. Shin JJ et al.(27/30). 2022. MIF is a Common Genetic Determinant of COVID-19 Symptomatic Infection and Severity. *QJM: An International Journal of Medicine*. doi: 10.1093/qjmed/h.
- 7 **Scientific paper**. A Valdes; L Ortega-Moreno; S Rojo-Rello; A Orduña; D Bernardo; A Cifuentes. (5/6). 2022. Metabolomics study of COVID-19 patients in four different clinical stages. *Scientific Reports*. doi.org/10.1038/s415.
- 8 **Scientific paper**. Cruz R et al.(135/177). 2022. Novel genes and sex differences in COVID-19 severity. *Hum Mol Genet*. doi: 10.1093/hmg/dda.
- 9 **Scientific paper**. A Tenesa, GenOMICC Investigators, 23andMe,; A Kousathanas, E Pairo-Castineira, K Rawlik, A Stuckey, C A Odhams, S Walker, C D Russell,; T Malinauskas, Y Wu, J Millar, X Shen, K S Elliott, F Griffiths, W Oosthuyzen,; et al; R H Scott, S Clohisey Hendry, L Moutsianas, A Law, M J Caulfield, J K Baillie. (55/69). 2022. Whole genome sequencing reveals host factors underlying critical Covid-19. *Nature*. doi.org/10.1038/s415.
- 10 **Scientific paper**. G Barturen; E Carnero-Montoro; M Martínez-Bueno; et al; M Alarcon-Riquelme; D Bernardo. (8/9). 2022. Whole-Blood DNA Methylation Analysis Reveals Respiratory Environmental Traits Involved in COVID-19 Severity Following SARS-CoV-2 Infection. *Nature Communications*. NCOMMS-21-29579C.
- 11 **Scientific paper**. A tamayo-Velasco; P Martínez-Paz; MJ Peñarrubia-Ponce; et al; H Gonzalo-Benito; D Bernardo. (14/17). 2021. 2-HGF, IL-1 $\alpha$  and IL-27 are robust biomarkers in early severity stratification of COVID-19 patients. *J Clin Med*. 10, pp.doi: 10.3390/jcm10092017.
- 12 **Scientific paper**. T Nakanishi; S Pigazzini; F Degenhardt; et al; A Ganna; D Bernardo. (22/49). 2021. Age-dependent impact of the major common genetic risk factor for COVID-19 on severity and mortality. *J Clin Invest*. <https://doi.org/doi:10.1172/JCI152386>

- 13 **Scientific paper.** E J Laserna-Mendieta; J A FitzGerald; L Arias-Gonzalez; J M Ollala; D Bernardo; M J Claesson; A J Lucendo. (5/7). 2021. Esophageal microbiome in active eosinophilic esophagitis and changes induced by different therapies. *Sci Rep.* 11-1, pp.7113. <https://doi.org/10.1038/s41598-021-86464-z>.
- 14 **Scientific paper.** A Tamayo-Velasco; MJ Peñarrubia-Ponce; FJ Álvarez; et al; D Bernardo (AC). (18/18). 2021. Evaluation of Cytokines as Robust Diagnostic Biomarkers for COVID-19 Detection. *J. Pers. Med.* <https://doi.org/doi:10.3390/jpm11070681>.
- 15 **Scientific paper.** A Morales; S Rojo Rello; H Cristóbal; et al; P García de Frutos; D Bernardo. (11/12). 2021. Growth Arrest-Specific Factor 6 (GAS6) is Increased in COVID-19 Patients and Predicts Clinical Outcome. *Biomedicines.* 9-4, pp.335-doi: 10.3390/biomedicines9040335.. <https://doi.org/10.3390/biomedicines9040335>
- 16 **Scientific paper.** D Reddi; L Durant; D Bernardo; et al; SC Knight. (2/10). 2021. In Vitro Priming of Human T Cells by Dendritic Cells Provides a Screening Tool for Candidate Vaccines for *B. pseudomallei*. *Vaccines.* 9, pp.929. <https://doi.org/10.3390/vaccines9080929>
- 17 **Scientific paper.** A Tamayo-Velasco; MJ Peñarrubia Ponce; FJ Álvarez; et al; D Bernardo (AC). (22/22). 2021. Can the cytokine profile according to ABO blood groups be related to worse outcome in COVID-19 patients? Yes, they can. *Frontiers in Immunology.* pp.<https://doi.org/10.3389/fimmu.2021.726283>.
- 18 **Scientific paper.** A Cossarizza et al. (17/184). 2021. Guidelines for the use of flow cytometry and cell sorting in immunological studies (third edition).*Eur J Immunol.* 51-12, pp.2708-3145.
- 19 **Scientific paper.** S Fernández-Tomé; P Indiano-Romacho; I Mora-Gutiérrez; et al; D Bernardo (AC). (13/13). 2021. Lunasin peptide is a modulator of the immune response in the human gastrointestinal tract. *Mol Nutr Food Res.*Jun;65(12):e2001034..
- 20 **Scientific paper.** COVID-19 Host Genetics Initiative (David Bernardo is a Member). 2021. Mapping the human genetic architecture of COVID-19. *Nature.* 600-7889, pp.472-477.
- 21 **Scientific paper.** L Ortega-Moreno; S Fernández-Tomé; M Chaparro; et al; D Bernardo (AC). (9/9). 2021. Profiling of Human Circulating Dendritic Cells and Monocyte Subsets Discriminates Between Type and Mucosal Status in Patients With Inflammatory Bowel Disease. *Inflamm Bowel Dis.* 27-2, pp.268-274.
- 22 **Scientific paper.** M D'Antonio; JP Nguyen; TD Arthur; H Matsui; COVID-19 Host Genetics Initiative (David Bernardo is a Member); A D'Antonio-Chronowska; KA Frazer. (5/7). 2021. SARS-CoV-2 susceptibility and COVID-19 disease severity are associated with genetic variants affecting gene expression in a variety of tissues. *Cell Rep.*37-7, pp.37(7):110020..
- 23 **Scientific paper.** C Alba; AC Marin; AG McNicholl; et al; D Bernardo (AC). (11/11). 2020. A quick flow cytometry protocol to assess *Helicobacter pylori* viability. *J Microbiol Methods.* 177, pp.106043.
- 24 **Scientific paper.** C Escudero-Hernández; A Martín; R de Pedro Andrés; L Fernández-Salazar; D Bernardo; E Arranz. (5/6). 2020. Circulating Dendritic Cells From Celiac Disease Patients Display a Gut-Homing Profile and Are Differentially Modulated by Different Gliadin-Derived Peptides. *Mol Nutr Food Res.* 64-6, pp.e1900989.
- 25 **Scientific paper.** C Escudero-Hernández; D Bernardo; E Arranz; JA Garrote. (2/4). 2020. Different Intraepithelial CD3+ Cell Numbers in Crohn's Disease and Ulcerative Colitis. *Inflammatory Bowel Diseases.* 26-3, pp.e14-e15.
- 26 **Scientific paper.** L Fernández Salazar; B Burgueño Gómez; C Escudero-Hernández; et al; ; D Bernardo. (6/9). 2020. Duodenal lymphogram as a complementary tool in the diagnosis of celiac disease in adults. *Rev Esp Enferm Dig.* 112-6, pp.434-439.
- 27 **Scientific paper.** E Arranz; A De Prado; A Fiz-López; E Arribas; JA Garrote; E Arranz; D Bernardo (AC). (7/7). 2020. Human intestinal dendritic cell and macrophage subsets in celiac disease. *International Review of Cell and Molecular Biology.* pp.10.1016/bs.ircmb.2020.09.006.
- 28 **Scientific paper.** C Escudero-Hernández; D Bernardo; E Arranz; JA Garrote. (2/4). 2020. Is Celiac Disease Really Associated with Inflammatory Bowel Disease?. *Rev Esp Enferm Dig.* 112-1, pp.4-6.

- 29 **Scientific paper.** L Ortega-Moreno; A Sanz-Garcia; MJ Fernández de la Fuente; et al; D Bernardo (AC). (12/12). 2020. Serum adipokines as non-invasive biomarkers in Crohn's disease. *Sci Rep.* 10-1, pp.18027.
- 30 **Scientific paper.** M Chaparro; I Guerra; M Iborra; et al; D Bernardo. (29/29). 2020. Usefulness of Monitoring Antitumor Necrosis Factor Serum Levels During the Induction Phase in Patients with Crohn's Disease. *Eur J Gastroenterol Hepatol.* 32-5, pp.588-596.
- 31 **Scientific paper.** L Vaquero; D Bernardo; F León; L Rodríguez-Martín; B Alvarez-Cuenllas; S Vivas. (2/6). 2019. Challenges to drug discovery for celiac disease and approaches to overcome them. *Expert Opin Drug Discov.* 88, pp.194-206.
- 32 **Scientific paper.** M. Chaparro; M. Barreiro-de Acosta; A. Echarri; et al; J.P. Gisbert; D. Bernardo. (19/24). 2019. Correlation between anti-TNF serum levels and endoscopic inflammation in inflammatory bowel disease patients. *Dig Dis Sci.* 64-3, pp.846-854.
- 33 **Scientific paper.** M. Chaparro; A Garre; E Ricart; E Iglesias-Flores; C Taxonera; E Domènech; JP Gisbert; ENEIDA study group (David Bernardo is a member). 2019. Differences between childhood and adulthood-onset inflammatory bowel disease: the CAROUSEL Study form GETECCU. *Aliment Pharmacol Ther.* 49-4, pp.419-428.
- 34 **Scientific paper.** M. Chaparro; A Garre; MF Guerra-Veloz; et al; JP Gisbert; D Bernardo. (30/31). 2019. Effectiveness and safety of the switch from Remicade® to CT-P13 in patients with inflammatory bowel disease. *J Crohns Colitis.* In press, pp.doi: 10.1093/ecco-jcc/jjz070.
- 35 **Scientific paper.** M Chaparro; A Aterido; I Guerra; et al; JP Gisbert; D Bernardo. (30/33). 2019. Functional rare variants influence the clinical response to anti-TNF therapy in Crohn's disease. *Therap Adv Gastroenterol.* 12, pp.1756284819867848-596.
- 36 **Scientific paper.** S. Fernández-Tomé; A.C. Marín; L. Ortega Moreno; et al; D. Bernardo (AC). (12/12). 2019. Immunomodulatory Effect of Gut Microbiota-Derived Bioactive Peptides on Human Immune System from Healthy Controls and Patients with Inflammatory Bowel Disease. *Nutrients.* 11-11, pp.doi: 10.3390/nu11112605..
- 37 **Scientific paper.** M. Martínez-López; S. Iborra; R. Conde-Garrosa; et al; D. Sancho; D. Bernardo. (21/23). 2019. Microbiota sensing by Mincle-Syk axis in dendritic cells regulates IL-17 and IL-22 and promotes intestinal immune barrier. *Immunity.* 50, pp.1-16.
- 38 **Scientific paper.** S. Fernández-Tomé; A. Montalban-Arques; A. Díaz-Guerra; et al; D. Bernardo (AC). (12/12). 2019. Peptides encrypted in the human intestinal microbial-exoproteome as novel biomarkers and immunomodulatory compounds in the gastrointestinal tract. *Journal of Functional Foods.* 52, pp.459-468.
- 39 **Scientific paper.** S. Fernández-Tomé; B. Hernández-Ledesma; M. Chaparro; P. Indiano-Romacho; J.P. Gisbert; D. Bernardo (AC). (6/6). 2019. Role of food proteins and bioactive peptides in inflammatory bowel disease. *Trends in Food Science and Technology.* 88, pp.194-206.
- 40 **Scientific paper.** D. Bernardo (AC); A.C. Marin; S. Fernández-Tomé; et al; J.P. Gisbert. (1/20). 2018. Human intestinal pro-inflammatory CD11c<sup>high</sup>CCR2<sup>+</sup>CX3CR1<sup>+</sup> macrophages, but not their tolerogenic CD11c<sup>-</sup>CCR2<sup>-</sup>CX3CR1<sup>-</sup> counterparts, are expanded in inflammatory bowel disease. *Mucosal Immunol.* In 11-4, pp.1114-1126.
- 41 **Scientific paper.** E.R. Mann; D. Bernardo; N.R. English; et al; S.C. Knight. (2/16). 2016. Compartment-specific immunity in the human gut; properties and functions of dendritic cells in the colon versus the ileum. *GUT.* 65-2, pp.256-270.
- 42 **Scientific paper.** D. Bernardo; L. Durant; E.R. Mann; et al; S.C. Knight. (1/30). 2016. Chemokine (C-C Motif) Receptor 2 mediates dendritic cell recruitment to the human colon but is not responsible for differences observed in dendritic cell subsets, phenotype and function between the proximal and distal colon. *Cell Mol Gastroenterol Hepatol.* 2-1, pp.22-39.
- 43 **Scientific paper.** D. Bernardo; J.A. Garrote; I. Nadal; et al; E. Arranz. (1/9). 2009. Is it true that coeliacs do not digest gliadin? Degradation pattern of gliadin in coeliac disease small intestinal mucosa. *GUT.* 58-6, pp.886-887.

- 44 Scientific paper.** D. Bernardo; J.A. Garrote; L. Fernández-Salazar; S. Riestra; E. Arranz. (1/5). 2007. Is gliadin really safe for non-coeliac individuals? IL-15 production in biopsy culture from non coeliacs challenged with gliadin peptides. GUT. 56-6, pp.889-890.
- 45 Book chapter.** D Bernardo (AC); S Riestra. (1/2). 2020. Modelos de inmunopatología: enfermedad inflamatoria intestinal. Inmunología para reumatólogos. Una visión integradora. SpringerHealthcare. pp.139-148. ISBN 978-84-09-19953-2.

### C.3. Research projects and contracts

- 1 Project.** PRDVL222467GONZ, Búsqueda de biomarcadores con utilidad en la práctica clínica en los pacientes con hepatocarcinoma recién diagnosticado. Predoctorales Valladolid AECC 2022. (Instituto de Biología y Genética Molecular). 01/09/2022-31/08/2026. 88.000 €.
- 2 Project.** Caracterización del Inmunoma intestinal en la enfermedad inflamatoria intestinal: similitudes y diferencias entre la enfermedad de Crohn y la colitis Ulcerosa. Grupo Español de Trabajo en Enfermedad de Crohn y Colitis Ulcerosa (II Beca GETECCU-MSD). (FUNDACION GENERAL DE LA UNIVERSIDAD DE VALLADOLID). 01/10/2022-30/09/2024. 12.000 €. Principal investigador.
- 3 Project.** Ramón y Cajal Research Fellow. (Universidad de Valladolid). 01/03/2019-29/02/2024. 308,6 €.
- 4 Project.** • Beca Asociación Española de Gastroenterología para Esófago-Estómago-Duodeno, Reclutamiento de los monocitos circulantes y su posterior condicionamiento hacia macrófagos en la mucosa de los pacientes con enfermedad celiaca. Asociación Española de Gastroenterología. (Universidad de Valladolid). 01/01/2021-31/12/2023. 60.000 €.
- 5 Project.** PID2019-104218RB-I00, Migración y diferenciación de las subpoblaciones de células dendríticas y monocitos en la mucosa intestinal de pacientes con enfermedad inflamatoria intestinal. Proyectos de I+D+i», en el marco de los Programas Estatales de Generación de Conocimiento y Fortalecimiento Científico y Tecnológico del Sistema de I+D+i y de I+D+i Orientada a los Retos de la Sociedad, del Plan Estatal de Investigación Científica y Técnica y de Innovación 2017-2020. (Universidad de Valladolid). 01/09/2020-31/05/2023. 139.150 €. Principal investigador.
- 6 Project.** GRS 2367A/21, Reclutamiento y condicionamiento de las sub-poblaciones de monocitos circulantes y macrófagos en la mucosa de pacientes con enfermedad inflamatoria intestinal. Gerencia Regional de Salud de Castilla y León. (Instituto de Biología y Genética Molecular). 01/01/2022-31/12/2022. 15.580 €.
- 7 Project.** SGL21-03-026, Caracterización de la memoria celular y humoral en respuesta a COVID-19. PTI Salud Global+ CSIC. WP5.. (Instituto de Biología y Genética Molecular). 01/04/2021-31/12/2022. 179.800 €.
- 8 Project.** SGL2021-03-038, Identificación y selección de biomarcadores. PTI Salud Global+ CSIC. WP7. (Instituto de Biología y Genética Molecular). 01/04/2021-31/12/2022. 42.546,93 €.
- 9 Project.** Predictive biomarkers for response to JAK-inhibitors and biologic therapies in ulcerative colitis by a multi-omic approach. Aspire Pfizer. (FUNDACION PARA LA INVESTIGACION BIOMEDICA DEL HOSPITAL UNIVERSITARIO "LA PRINCESA"). 01/01/2020-31/12/2022. 201.091,6 €. Principal investigador.
- 10 Project.** IR2021-UVA04, Citómetro tipo sorter espectral de 3 láseres y 38 detectores. Infraestructura en Red de Castilla y Leon (INFRARED). (Universidad de Valladolid). 01/01/2022-12/12/2022. 484.237 €. Principal investigador.
- 11 Project.** Reclutamiento de monocitos y posterior diferenciación a macrófagos en la mucosa intestinal de pacientes con enfermedad celiaca: implicación para el desarrollo de nuevas terapias. Federación de Asociaciones de Celiacos de España. (Universidad de Valladolid). 01/10/2020-30/09/2022. 21.000 €. Principal investigador.
- 12 Project.** GRS 2232/A/2020, Influencia de la duración de la dieta sin gluten en los marcadores séricos y tisulares de la enfermedad celiaca. GERENCIA REGIONAL DE SALUD DE CASTILLA Y LEON. (Hospital Clínico Universitario de Valladolid). 01/01/2021-31/12/2021. 14.435 €. Team member.

- 13 Project.** Implicación funcional de las sub-poblaciones de células dendríticas en la patogénesis de la enfermedad de Crohn. Grupo Español de Trabajo en Enfermedad de Crohn y Colitis Ulcerosa (II Beca GETECCU-MSD). (FUNDACION GENERAL DE LA UNIVERSIDAD DE VALLADOLID). 01/01/2020-31/12/2021. 12.000 €. Principal investigator. Funds obtained, as PI, to identify the specific mucosal dendritic cell subsets which mediates the differentiation of pro-inflammatory T-cells, both in resting conditions and in patients with inflamma...
- 14 Project.** PI18/00622, Identificación de biomarcadores de respuesta al tratamiento con fármacos biológicos en la enfermedad inflamatoria intestinal mediante abordaje proteómico y de citometría de masas. Instituto de Salud Carlos III. (FUNDACION PARA LA INVESTIGACION BIOMEDICA DEL HOSPITAL UNIVERSITARIO "LA PRINCESA"). 01/01/2019-31/12/2021. 290.400 €. PI of the cytometry approach.
- 15 Project.** CSIC-COV19-016/202020E155, Biomarcadores de pronóstico y mecanismos de inflamación mediante citometría de masas y multiplex. Consejo Superior de Investigaciones científicas. (Universidad de Valladolid). 01/05/2020-31/10/2021. 60.000 €. Principal investigator.
- 16 Project.** PID2019-104218RB-I00, Biomarcadores de pronóstico y mecanismos de inflamación mediante citometría de masas y multiplex. Proyectos COVID-19 Junta de Castilla y León. (Universidad de Valladolid). 01/07/2020-31/07/2021. 454.760 €.
- 17 Project.** IR2020-1-UVA01, Citómetro espectral equipado con 5 láseres (355 nm, 405 nm, 488 nm, 561 nm, 638 nm) y con 67 detectores. Infraestructura en Red de Castilla y León (INFRARED). (Universidad de Valladolid). 01/01/2020-12/01/2021. 490.520 €. Principal investigator.
- 18 Project.** GRS COVID 43/A/20, Caracterización de la memoria celular y humoral en respuesta a COVID-19. GERENCIA REGIONAL DE SALUD DE CASTILLA Y LEON. (Hospital Clínico Universitario de Valladolid). 01/07/2020-31/12/2020. 7.920 €. Team member.
- 19 Project.** Reclutamiento de los monocitos circulantes y su posterior condicionamiento hacia macrófagos en la mucosa de los pacientes con enfermedad celiaca. GERENCIA REGIONAL DE SALUD DE CASTILLA Y LEON. (Hospital Clínico Universitario de Valladolid). 01/01/2020-31/12/2020. 14.760 €. Team member.
- 20 Project.** Efecto de los péptidos inmunomoduladores secretados por la microbiota intestinal sobre las células dendríticas de la mucosa en los pacientes con Colitis Ulcerosa. Grupo Español de Trabajo en Enfermedad de Crohn y Colitis Ulcerosa (II Beca GETECCU-MSD). (FUNDACION PARA LA INVESTIGACION BIOMEDICA DEL HOSPITAL UNIVERSITARIO "LA PRINCESA"). 01/01/2018-31/12/2019. 12.000 €. Principal investigator. Funds obtained, as PI, to continue studying the immunomodulatory role of novel bioactive bacteria peptides which I had previously identified (funds provided by the "Asociación Castellana de Aparato D...
- 21 Project.** Proteomic characterization of extracellular vesicles in inflammatory bowel diseases: a novel proteomic approach for biomarker discovery. Grupo Español de Trabajo en Enfermedad de Crohn y Colitis Ulcerosa (• XX Beca GETECCU-Faes Farma). (FUNDACION PARA LA INVESTIGACION BIOMEDICA DEL HOSPITAL UNIVERSITARIO "LA PRINCESA"). 01/01/2018-31/12/2019. 12.000 €. Team member. Funds obtained, to determine whether the characterization of the proteomic profile of human circulating extracellular vesicles may have utility as novel biomarkers to aid on IBD diagnosis and monitor...
- 22 Contract.** A study on peripheral blood immunophenotype analyzed by spectral flow cytometry as a predictor of response and toxicity to PD-L1 inhibitor treatment in advanced bladder cancer Pfizer, S.A.. (FUNDACION GENERAL DE LA UNIVERSIDAD DE VALLADOLID). 2023-01/01/2025. 20.000 €.
- 23 Contract.** Immunomodulatory effect of tofacitinib on human intestinal dendritic cell subsets from patients with ulcerative colitis Pfizer, S.A.. (FUNDACION GENERAL DE LA UNIVERSIDAD DE VALLADOLID). 2020-01/01/2022. 28.750 €.

- 24 Contract.** Ex vivo modulatory effect of biological drugs for inflammatory bowel disease on the mucosa and on peripheral blood mononuclear cells Janssen. (FUNDACION PARA LA INVESTIGACION BIOMEDICA DEL HOSPITAL UNIVERSITARIO "LA PRINCESA"). 2018-01/01/2020. 12.000 €.
- 25 Contract.** Ex-vivo modulatory effect of a novel 5-mer peptide on the IBD mucosa Spherium Biomed. (FUNDACION PARA LA INVESTIGACION BIOMEDICA DEL HOSPITAL UNIVERSITARIO "LA PRINCESA"). 2018-01/01/2019. 25.000 €.
- 26 Contract.** Ex vivo modulatory effect of biological drugs for inflammatory bowel disease on the mucosa and on peripheral blood mononuclear cells Merck Investigator Studies Program from MSD. (FUNDACION PARA LA INVESTIGACION BIOMEDICA DEL HOSPITAL UNIVERSITARIO "LA PRINCESA"). 2017-01/01/2019. 34.961 €.

#### **C.4. Activities of technology / knowledge transfer and results exploitation**

- 1 Patent of invention.** PCT/EP2022/057048; EP21382219. Method for the diagnosis of a coronavirus infection Spain. 2021. Instituto de Salud Carlos III.
- 2 Patent of invention.** PCT/ES2012/070673; WO 2013/045737. Péptido inmunogénico del gluten y sus aplicaciones Spain. 2013. Instituto de Biología y Genética Molecular. BIOMEDAL, S.L.
- 3 Patent of invention.** PCT/ES2012/070643; WO/2013/034795. Péptido secretado por Lactobacillus plantarum con función inmunomoduladora Spain. 2013. Imperial College London. Imperial Innovations (UK).

#### **C.5. Stays in public or private R&D centres**

- 1** Imperial College London. United Kingdom. London. 05/2009-05/2015. 6 years. Post-doctoral.
- 2** Open University. . United Kingdom. Milton Keynes. 12/2010-11/2011. 12 months. Guest.
- 3** vrije universiteit medisch centrum van Amsterdam. . Holland. amsterdam. 02/2006-07/2006. 6 months. Doctorate.