CV Date	19/06/2025

Part A. PERSONAL INFORMATION

First Name	David		
Family Name	Bernardo Ordiz		
Sex	Not Specified	Date of Birth	
ID number Social Security, Passport			
URL Web	https://www.ibgm.uva.es/investigación/grupos-de-investigación/inmunología-de-la		
Email Address			
Open Researcher and Contributor ID (ORCID)	0000-0002-2843-6696		

A.1. Current position

Job Title	Profesor Permanente laboral		
Starting date	2024		
Institution	Universidad de Valladolid		
Department / Centre	Pediatria e Inmunologia / Instituto de Biomedicina y Genética Molecular de Valladolid		
Country	Spain	Phone Number	
Keywords	Cell culture; Tissue culture; Clinical biology		

A.2. Previous positions (Research Career breaks included)

Period	Job Title / Name of Employer / Country
2019 - 2024	Ramón y Cajal Tenure Track / University of Valladolid / Spain
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
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

A.3. Education

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

Part B. CV SUMMARY

My scientific career began with my initial BSc in Biology (University of Oviedo, Spain, 2002). I successfully converted from a MSc in Molecular genetics (conservation and population genetics, University of Oviedo, Spain, 2004) to a PhD with honours in molecular immunology of coeliac disease (CD) under supervision of Dr Eduardo Arranz (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 though my PhD proving my independent thinking together with my outstanding 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 study of antigen presenting cells, including dendritic cells and macrophages, in the human gastrointestinal tract. Subsequently funded by the British Government through the BBSRC, during my time at Imperial College London (2009-2015) I directed the work of 3 MD students, an allocated research technician and several visiting researchers hence further enhancing my direction and supervision skills. 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 (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 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 fellowship which allowed me to establish myself as the independent **Principal Investigator of the Mucosal Immunology Lab** at the Institute of Biomedicine and Molecular Genetics (IBGM) at University of Valladolid where I am currently a lecturer in Immunology after obtaining the I3 certificate (I3/2021/1392). My lab, where I am currently supervising the work of 1 junior PI, 2 postdocs and 6 phD students, is devoted to the study of the **human mucosal immune system**, with particular focus **on the study of autoimmune diseases including IBD and CD**.

To date, I have 4 PCT patents and >125 published peer-reviewed SCI publications on human mucosal immunology (h-index 36, according to Scopus; and h-index 44 according to Google Scholar). As a PI, I have obtained funds in projects funded by National and regional Governments, CSIC, pharmaceutical companies, patient associations and scientific societies. Moreover, I am also involved in scientific management since I am a member of the Counselling Board of the Spanish Society of Coeliac Disease (as a treasurer), the Spanish Cytometry Group (GECIT) under the umbrella of the Spanish Society of Immunology (SEI), member of the basic research group of the Spanish Working Group on Crohn's Disease and Ulcerative Colitis (GETECCU-BAS), and member of the Executive Committee of the CSIC's Interdisciplinary Thematic Platform on Global Health where I am National Coordinator of its WP5: IMMUNE where I supervise the work of 24 research.

Finally. I am also involved in public engagement activities being scientific advisor of 2 patient associations ("Coeliac UK"; "Asociación de Celiacos de Madrid"), having written 5 lay articles in non-scientific journals, performed lay format lectures. being a being the coordinator of a science divulgation blog where I also provide original posts (www.dciencia.es) and having published lay articles in several media (The Conversation, Huffington Post, InnovaSpain, LaSexta, etc.).

Part C. RELEVANT ACCOMPLISHMENTS

C.1. Most important publications in national or international peer-reviewed journals, books and conferences

AC: corresponding author. (nº x / nº y): position / total authors. If applicable, indicate the number of citations

1 **Scientific paper**. E Arribas-Rodríguez; Á De Prado; B de Andrés; et al; (12/12) D Bernardo (AC). 2025. Tofacitinib downregulates JAK1 and JAK3 on human intestinal monocytes and macrophages without affecting dendritic cells phenotype or function. Journal of Translational Autoimmunity. https://doi.org/10.1.

2 **Scientific paper**. A Fiz-López; Á De Prado; E Arribas-Rodríguez; et al; (11/11) D Bernardo (AC). 2024. Biological variability of human intraepithelial lymphocytes throughout the human gastrointestinal tract in health and coeliac disease. Eur J Clin Invest. pp.10.3389/fonc.2024.1407580.

3 **Scientific paper**. A De Prado; P Cal-Sabater; A Fiz-López et al; et al; (16/16) D Bernardo (AC). 2024. Complex immune network and regional consistency in the human gastric mucosa revealed by high-resolution spectral cytometry. Scientific Reports. 14-28685.

4 **Scientific paper**. CG de Castro; AG del Hierro; J H-Vázquez; S Cuesta-Sancho; (5/5) D Bernardo (AC). 2024. State-of-the-art cytometry in the search of novel biomarkers in digestive cancers. Frontiers in Oncology. pp.10.3389/fonc.2024.1407580.

5 **Scientific paper**. J Hernandez-Vazquez; P Cal-Sabater; E Arribas-Rodríguez et al, (46/46) D Bernardo (AC). 2024. Unbiased spectral cytometry immunome characterization predicts COVID-19 mRNA vaccine failure in older adults and patients with lymphoid malignancies. Frontiers Immunol. doi: 10.3389/fimmu.2.

6 **Scientific paper**. S Fernández-Tomé; P Indiano-Romacho; I Mora-Gutiérrez; et al; (13/13) D Bernardo (AC). 2021. Lunasin peptide is a modulator of the immuen response in the human gastrointestinal tract. Mol Nutr Food Res.Jun;65(12):e2001034..

7 **Scientific paper**. L Ortega-Moreno; S Fernández-Tomé; M Chaparro; et al; (9/9) D Bernardo (AC). 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.

8 **Scientific paper**. M. Martínez-López; S. Iborra; R. Conde-Garrosa; et al; D. Sancho; (21/23) D. Bernardo. 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.

9 **Scientific paper**. S. Fernández-Tomé; A. Montalban-Arques; A. Díaz-Guerra; et al; (12/12) D. Bernardo (AC). 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.

10 **Scientific paper**. S. Fernández-Tomé; B. Hernández-Ledesma; M. Chaparro; P. Indiano-Romacho; J.P. Gisbert; (6/6) D. Bernardo (AC). 2019. Role of food proteins and bioactive peptides in inflammatory bowel disease. Trends in Food Science and Technology.88, pp.194-206.

11 **Scientific paper**. (1/3) D. Bernardo (AC); M. Chaparro; J.P. Gisbert. 2018. Human intestinal dendritic cells in inflammatory bowel diseases. Mol Nutr Food Res. 62-1700931. doi: 10.100, pp.10.1002/mnfr.201700931.

12 **Scientific paper**. (1/20) D. Bernardo (AC); A.C. Marin; S. Fernández-Tomé; et al; J.P. Gisbert. 2018. Human intestinal pro-inflammatory CD11chighCCR2+CX3CR1+ macrophages, but not their tolerogenic CD11c-CCR2-CX3CR1- counterparts, are expanded in inflammatory bowel disease. Mucosal Immunol. In 11-4, pp.1114-1126.

13 **Scientific paper**. E.R. Mann; (2/16) D. Bernardo; N.R. English; et al; S.C. Knight. 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.

14 **Scientific paper**. (1/30) D. Bernardo; L. Durant; E.R. Mann; et al; S.C. Knight. 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.

15 **Scientific paper**. H.O. Al-Hassi; E.R. Mann; B. Sánchez; et al; (17/17) D. Bernardo. 2014. Altered human gut dendritic cell properties in ulcerative colitis are reversed by Lactobacillus plantarum extracellular encrypted peptide STp. Mol Nutr Food Res. 58-5, pp.1132-1143.

16 **Scientific paper**. (1/9) D. Bernardo; J.A. Garrote; I. Nadal; et al; E. Arranz. 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.

17 **Scientific paper**. (1/5) D. Bernardo; J.A. Garrote; L. Fernández-Salazar; S. Riestra; E. Arranz. 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.

C.3. Research projects and contracts

1 **Project**. PID2023-148270OB-I00, Unravelling human intestinal VISTA immunoregulatory capacity in inflammatory bowel disease (VISTA-IBD). PROYECTOS DE GENERACIÓN DE CONOCIMIENTO 2023. (Universidad de Valladolid). 01/11/2024-31/10/2027. 125.000 €. Principal investigator.

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). (Universidad de Valladolid). 01/10/2022-30/09/2024. 12.000 €. Principal investigator.

3 **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). 01/09/2020-31/05/2024. 139.150 €. Principal investigator.

4 **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 investigator.

5 **Project**. PID2019-104218RB-I00, Biomarcadores de pronóstico y mecanismos de inflamación mediante citometriá de masas y multiplex. Proyectos COVID-19 Junta de Castilla y León. (Universidad de Valladolid). 01/07/2020-31/07/2021. 454.760 €. Principal investigator.

6 **Project**. SAF2014-56642-JIN, Compartimentalización de las células dendríticas intestinales humanas en enfermedad de Crohn. ministerio de economia y competitividad. D Bernardo. (FUNDACION PARA LA INVESTIGACION BIOMEDICA DEL HOSPITAL UNIVERSITARIO "LA PRINCESA"). 01/10/2015-30/09/2018. 169.000 €. Principal investigator.

7 **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 €.

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

1 **Patent of invention**. PM Baptista; B Sánchez; D Bernardo; JI Almeida; J Martínez García; A Lanas Arbeloa; N Beraza; N Sánchez Romero. PCT/EP2025/064734. Synthetic gut microbiota-derived peptides and uses thereof. Application Spain. 2024. Universidad de Zaragoza.

2 **Patent of invention**. David Bernardo; José Antonio Garrote; Alfredo Blanco Quiros; Eduardo Arranz; Angel Cebolla. 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**. Borja Sánchez; Abelardo Margolles; David Bernardo; Stella C Knight; Hafid O Al-Hassi. PCT/ES2012/070643; WO/2013/034795. Péptido secretado por Lactobacillus plantarum con función inmunomoduladora Spain. 2013. Imperial College London. Imperial Innovations (UK).