CV Date	19/11/2025

Part A. PERSONAL INFORMATION

First Name *	Ana María		
Family Name *	Márquez Ortiz		
Sex *	Female	Date of Birth *	19/09/1981
ID number Social Security, Passport *	74842485W	Phone Number *	(0034) 627903164
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Researcher's identification number	Open Researcher and Contributor ID (ORCID) *	0000-0001-9913-7688	
	Researcher ID		
	Scopus Author ID	23018968600	

* Mandatory

A.1. Current position

Job Title	Tenured Researcher		
Starting date	2021		
Institution	Spanish National Research Council (CSIC)		
Department / Centre	Cell Biology and Immunology / Institute of Parasitology and Biomedicine López-Neyra		
Country	Spain	Phone Number	958181641
Keywords	Molecular mechanism of disease; Genetics		

A.2. Previous positions

Period	Job Title / Name of Employer / Country
2018 - 2021	Miguel Servet Fellow / Fundación Pública Andaluza para la investigación Biosanitaria Andalucía Oriental (FIBAO)
2016 - 2018	Juán de la Cierva Fellow / Spanish National Research Council (CSIC)
2014 - 2016	Río Hortega Fellow / Fundación Pública Andaluza para la investigación Biosanitaria Andalucía Oriental (FIBAO)
2012 - 2014	Postdoctoral researcher / Spanish National Research Council (CSIC)
2010 - 2012	Lab Technician / Andalusian Human DNA Bank. Consejería de Salud (Junta de Andalucía)
2009 - 2010	Head of the Immunology Department / Integra Laboratorios, SL
2005 - 2009	Resident Member of Biological Staff (FSE program) / Clinical Immunology Department. Hospital Clínico San Carlos

A.3. Education

Degree/Master/PhD	University / Country	Year
PhD programme in Immunology	Complutense University of Madrid	2011
Bachelor in Biochemistry	University of Granada	2003

A.4. General quality indicators of scientific production

1. Papers in impact journals (source: JCR): 69 (last 6 years: 31)
2. International book chapters: 3 (last 6 years: 2).
3. Papers within quartile 1 in category (source: JCR): 45 (last 6 years: 21)
4. Papers within decile 1 in category (source: JCR): 17 (last 6 years: 10)
5. Papers as 1st author (either only or shared): 26 (last 6 years: 4)

6. Papers as corresponding or last author: 25 (last 6 years: 10)
7. Average impact factor (source: JCR): 6.78 (last 6 years: 9.57)
8. Citations (source: Google Scholar): 1,796 (last 6 years: 862); (Scopus): 1,354 (last 6 years: 787).
9. H-index (source: Google Scholar): 26 (last 6 years: 17); (Scopus): 23.
10. i10-index (source: Google Scholar): 46 (last 6 years: 34).
11. Research interest score (source: ResearchGate): 805.9 (higher than 91% of ResearchGate members).
12. Author metrics (source: Scopus): 61% of documents co-authored with researchers in other countries; 50% of documents in the top 25% most cited document worldwide; 77.3% of documents in the top 25% journals by CiteScore.

Part B. CV SUMMARY

My scientific career has always been focused on the elucidation of the molecular basis of immune-mediated diseases. My initial work in this field began during my residency under the Formación Sanitaria Especializada (FSE) program at the Immunology Department of Hospital Clínico San Carlos (Madrid). The main objective of my Thesis was to shed light into the genetic component of inflammatory bowel diseases, obtaining my PhD in 2011 (Universidad Complutense de Madrid).

During my postdoctoral stage, I worked at the Biosanitary Research Institute of Granada (ibs.Granada), as a Río Hortega Fellow (Institute of Health Carlos III, ISCIII), and at the Institute of Parasitology and Biomedicine "López-Neyra" IPBLN, (CSIC, Granada), as a Juán de la Cierva-incorporación Fellow (Ministry of Economy, Industry and Competitiveness). My postdoctoral research primarily focused on the genetic basis of various autoimmune diseases, achieving high productivity. Notably, I played a central role in coordinating and publishing several large-scale genetic analyses across different pathologies, collaborating with international consortia, and identifying numerous new risk factors and potential therapeutic targets in autoimmunity. The results of such international effort were published in prestigious scientific journals such as Genome Medicine (D1 in 'Genetics and Heredity') or Annals of the Rheumatic Diseases (D1 in "Rheumatology"), in where I served as both the first and corresponding author.

In 2018, I rejoined ibs.Granada as a Miguel Servet Fellow (ISCIII) and began a new line of research focused on identifying the molecular causes of giant cell arteritis using -omic approaches. In 2021, I moved to the IPBLN as a tenured researcher, continuing this research line. This work has been supported by funding from ISCIII (CP17/00008 and PI18/00040) and the Spanish Ministry of Science, Innovation, and Universities (PID2022-136416OB-I00), leading to significant findings in understanding the pathogenesis of giant cell arteritis and other systemic vasculitides, including the discovery of new molecular mechanisms and potential biomarkers.

Over the past six years (from 2018), I have participated in 11 national projects, serving as the principal investigator in 4 of them, and in 2 European projects as a collaborator. I have supervised 8 Master's theses, 2 Doctoral theses, and a Río Hortega postdoctoral fellow. I am currently supervising two PhD students.

Additionally, I lecture in the "Máster en Investigación y Avances en Inmunología Molecular y Celular" at the University of Granada, I am part of the RICOR (Red de Investigación Cooperativa Orientada a Resultados en Salud, RD21/0002/039, ISCIII), serve on the executive committee of the Asociación Andaluza de Enfermedades Autoinmunes (AADEA) and I am the head of the Department of Cell Biology and Immunology at IPBLN.

Part C. RELEVANT ACCOMPLISHMENTS

C.1. Publications

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

1 **Scientific paper**. Martínez-Gutiérrez Laura, Rodriguez-Martin Inmaculada, Borrego-Yaniz Gonzalo, et al; (12/12), Márquez Ana (AC). 2025. Cross-Trait Meta-Analysis Reveals a Genetic Link between Inflammation and Aging in Giant Cell Arteritis. Aging Dis. In press.

2 **Scientific paper**. Cerván-Martín Miriam, Pegoraro Francesco, Martínez-López Javier, et al. (5/16). 2025. Unraveling the molecular landscape of Erdheim-Chester disease: new insights from methylome and transcriptome integration. Leukemia. ;39(11):2758-2766.

3 **Scientific paper**. Borrego-Yaniz Gonzalo, Márquez Ana, Estupiñán-Moreno Elkyn, et al. (2/19). 2025. Genome-wide DNA methylation study reveals specific signatures in the affected arterial tissue of giant cell arteritis patients. Arthritis Rheumatol. In press

4 **Scientific paper**. Borrego-Yaniz, Gonzalo; Ortiz-Fernandez, Lourdes; Madrid-Paredes, Adela; et al; (51/51) Marquez, Ana (AC). 2024. Risk loci involved in giant cell arteritis susceptibility: a genome-wide association study. Lancet Rheumatology. 6, pp.e374-e383.

5 **Scientific paper**. Lourdes Ortiz-Fernández; Elio G. Carmona; Martin Kerick; et al; (25/25) Ana Marquez (AC). 2023. Identification of new risk loci shared across systemic vasculitides points towards potential target genes for drug repurposing.Annals of the Rheumatic Diseases. 82-6, pp.837-847.

6 **Scientific paper**. Estupinan-Moreno, Elkyn; Hernandez-Rodriguez, Jose; Li, Tianlu; et al; Ortiz-Fernandez, Lourdes; (10/13) Marquez, Ana. 2024. Decoding CD4+T cell transcriptome in giant cell arteritis: Novel pathways and altered cross-talk with monocytes. Journal of Autoimmunity. 146.

7 **Scientific paper**. Miguel Ángel González-Gay; Elena Heras-Recuero; Teresa Blázquez-Sánchez; et al; Raquel Largo; (8/9) Ana Márquez. 2024. Genetics of vasculitis. Best Pract Res Clin Rheumatol. In press.

8 **Scientific paper**. Martínez-López J; (2/24) Márquez A; Pegoraro F; et al; Vaglio A. 2024. Genome-wide association study identifies the first germline genetic variant associated with Erdheim Chester disease.Arthritis & rheumatology (Hoboken, N.J.). 76-1, pp.141-145.

9 **Scientific paper**. Régnier P; Le Joncour A; Maciejewski-Duval A; et al; Saadoun D; (12/18) Márquez A. 2023. CTLA-4 Pathway Is Instrumental in Giant Cell Arteritis.Circulation research. 133, pp.298-312.

10 **Scientific paper**. Javier Martínez-López; Martin Kerick; Lourdes Ortiz-Fernández; Marialbert Acosta-Herrera; (5/6) Ana Márquez; Javier Martín. 2023. FLT3 functional low-frequency variant rs76428106-C is associated with susceptibility to systemic sclerosis.Rheumatology (Oxford). 62-(SI), pp.SI138-SI142.

11 **Scientific paper**. Batista-Liz J.C.; Calvo-Río V.; Sebastián Mora-Gil M.; et al; López-Mejías R.2023. Mucosal Immune Defence Gene Polymorphisms as Relevant Players in the Pathogenesis of IgA Vasculitis?. International Journal of Molecular Sciences. 24.

12 **Scientific paper**. Carmona, Elio G.; Callejas-Rubio, Jose Luis; Raya, Enrique; et al; (12/12) Marquez, Ana (AC). 2023. Single-cell transcriptomic profiling reveals a pathogenic role of cytotoxic CD4+T cells in giant cell arteritis. Journal of Autoimmunity. 142.

13 **Scientific paper**. Adela Madrid-Paredes; Javier Martín; (3/3) Ana Márquez. 2022. -Omic Approaches and Treatment Response in Rheumatoid Arthritis.Pharmaceutics. 14-8, pp.1648.

14 **Scientific paper**. (1/2) Ana Márquez; Javier Martín. 2022. Genetic overlap between type 1 diabetes and other autoimmune diseases.Semin Immunopathol. 44-1, pp.81-87.

15 **Scientific paper**. Giorgio Trivioli; (2/7) Ana Marquez; Davide Martorana; Michelangelo Tesi; Andreas Kronbichler; Paul A Lyons; Augusto Vaglio. 2022. Genetics of ANCA-associated vasculitis: role in pathogenesis, classification and management.Nature reviews. Rheumatology. 18-10, pp.559-574.

16 **Scientific paper**. Elio G. Carmona; Jose A. Garcia-Gimenez; Raquel Lopez-Mejias; et al; (20/20) Ana Marquez (AC). 2022. Identification of a shared genetic risk locus for Kawasaki disease and immunoglobulin A vasculitis by a cross-phenotype meta-analysis. Rheumatology. 61-3, pp.1204-1210.

17 **Scientific paper**. Joao Carlos Batista Liz; Fernanda Genre; Verónica Pulito-Cueto; et al; Raquel López-Mejías; (6/30) Ana Márquez. 2022. IgA Vasculitis: Influence of CD40, BLK and BANK1 Gene Polymorphisms.Journal of clinical medicine. 11-19, pp.5577.

18 **Scientific paper**. Elkyn Estupinan-Moreno; Lourdes Ortiz-Fernandez; Tianlu Li; et al; Javier Martin; (11/13) Ana Marquez. 2022. Methylome and transcriptome profiling of giant cell arteritis monocytes reveals novel pathways involved in disease pathogenesis and molecular response to glucocorticoids. Annals of the Rheumatic Diseases. *Shared senior authorship. 81-9, pp.1290-1300.

19 **Scientific paper**. Diana Prieto-Peña; Sara Remuzgo-Martínez; Fernanda Genre; et al; Miguel A González-Gay; (19/23) Ana Márquez. 2022. Vascular endothelial growth factor haplotypes are associated with severe ischaemic complications in giant cell arteritis regardless of the disease phenotype.Clinical and experimental rheumatology. 40-4, pp.727-733.

20 **Scientific paper**. Sara Remuzgo-Martínez; Belén Atienza-Mateo; J Gonzalo Ocejo-Vinyals; et al; Miguel A González-Gay; (7/38) Ana Márquez. 2021. HLA association with the susceptibility to anti-synthetase syndrome.Joint Bone Spine. 88-3, pp.105115.

21 **Scientific paper**. Diana Prieto-Peña; Sara Remuzgo-Martínez; Fernanda Genre; et al; Raquel López-Mejías; (9/30) Ana Márquez. 2021. Role of the IL33 and IL1RL1 pathway in the pathogenesis of Immunoglobulin A vasculitis.Scientific Reports. 11-1, pp.16163.

22 **Scientific paper**. David Gonzalez-Serna; Eguzkine Ochoa; Elena Lopez-Isac; et al; (12/12) Ana Marquez (AC). 2020. A cross-disease meta-GWAS identifies four new susceptibility loci shared between systemic sclerosis and Crohn's disease. Scientific Reports. 10-1, pp.1862. ISSN 2045-2322.

23 **Scientific paper**. David González-Serna; Gonzalo Villanueva-Martin; Marialbert Acosta-Herrera; (4/5) Ana Márquez; Javier Martín. 2020. Approaching Shared Pathophysiology in Immune-Mediated Diseases through Functional Genomics.Genes (Basel). 11-12, pp.1482.

24 **Scientific paper**. Amalia Lamana; Ricardo Villares; Iria V Seoane; et al; Mario Mellado; (9/17) Ana Marquez. 2020. Identification of a Human SOCS1 Polymorphism That Predicts Rheumatoid Arthritis Severity.Frontiers in Immunology. 11, pp.1336.

25 **Scientific paper**. Yoon-Jeong Oh; Dong-Yeop Shin; Sang Mee Hwang; et al; Jin Kyun Park; (9/12) Ana Márquez. 2020. Mutation of ten-eleven translocation-2 is associated with increased risk of autoimmune disease in patients with myelodysplastic syndrome.Korean Journal of Internal Medicine. 35-2, pp.457-464.

C.2. Conferences and meetings

1 Explorando las bases moleculares de la arteritis de células gigantes mediante estudios ómicos. 2do Congreso de la Sociedad Española Multidisciplinar de Enfermedades Autoinmunes Sistémicas. Sociedad Española Multidisciplinar de Enfermedades Autoinmunes Sistémicas (SEMAIS). 2025. Participatory - invited/keynote talk. Conference.

2 Aplicación de estudios ómicos de célula única en las enfermedades autoinmunes. XII Congreso de la Asociación Andaluza de Enfermedades Autoinmunes. Asociación Andaluza de Enfermedades Autoinmunes (AADEA). 2024. Participatory - invited/keynote talk. Conference.

3 Taller en enfermedades autoinmunes sistémicas. 1er Congreso de la Sociedad Española Multidisciplinar de Enfermedades Autoinmunes Sistémicas. Sociedad Española Multidisciplinar de Enfermedades Autoinmunes Sistémicas (SEMAIS). 2023. Participatory - invited/keynote talk. Conference.

4 Bases moleculares de las vasculitis sistémicas. Novedades en EAS: From Bench to Bedside. Aula UGR-GSK de Lupus Eritematosos Sistémico. 2022. Spain. Participatory - invited/keynote talk. Seminar.

5 Genomic and epigenomic findings in vasculitis. 4th EUVAS Vasculitis Course. European

Vasculitis Society (EUVAS). 2022. Italy. Participatory - invited/keynote talk. Conference.

6 Concepto de puntuación de riesgo poligénico. XI Congreso de la Asociación Andaluza de Enfermedades Autoinmunes. Asociación Andaluza de Enfermedades Autoinmunes (AADEA). 2022. Spain. Participatory - invited/keynote talk. Conference.

7 Mujer y Autoinmunidad. Aspectos genéticos y epigenéticos. X Seminario de Enfermedades Autoinmunes. Asociación Andaluza de Enfermedades Autoinmunes, AADEA. 2021. Participatory - Plenary session. Conference.

C.3. Research projects and contracts

1 **Project**. PID2022-136416OB-I00, Caracterización del perfil epigenómico de la arteritis de células gigantes. Proyectos de generación de Conocimiento (Ministerio de Ciencia e Innovación). Ana Márquez Ortiz. 2023-2026. 262.500 €. Principal investigator.

2 **Project**. PMP22/00101, Clinical validation of OPTIBIO algorithm to predict persistent remission in rheumatoid arthritis patients treated with biological therapy. (REMRABIT- plus). Proyectos de investigación de Medicina Personalizada de Precisión (ISCIII). Francisco J Blanco. 2022-2025. 1.724.889,62 €. Team member.

3 **Project**. Exploring the genetic landscape of Erdheim-Chester disease by integrating GWAS and -omic data. ECD Global Alliance. Augusto Vaglio. 2022-2024. 50.000 €. Team member.

4 **Project**. RD21/0002/0039, Red de Enfermedades Inflamatorias (REI). Programa Red de Investigación Cooperativa Orientadas a Resultados en Salud (RICORS). Javier Martín. 2022-2024. 109.403 €. Team member.

5 **Project**. CM20/00141, Adela María Madrid paredes. Contratos Río Hortega. 2021-2023. 53.732 €. Group Leader.

6 **Project**. FI19/00108, Elio Gabriel Carmona Rubio. Contratos PFIS: Contratos Predoctorales de Formación en Investigación en Salud. 2020-2023. 82.400 €. Group leader.

7 **Project**. B-CTS-340-UGR18, Avances en el conocimiento de las bases moleculares de la esclerosis sistémica: de las asociaciones genéticas a su implicación funcional. Programa Operativo FEDER Andalucía. Ana María Márquez Ortiz. 2020-2022. 10.400 €. Principal investigator.

8 **Project**. HELICAL. HEalth data LInkage for ClinicAL benefit. Programa H2020-MSCA-ITN-ETN. Mark Little. 2018-2022. 250.900 €. Team member.

9 **Project**. CV20-77708, Análisis multi-ómico en pacientes con Covid-19 como predictor de la evolución de la enfermedad y su respuesta al tratamiento. Consejería de Economía, Conocimiento, Empresas y Universidad. Junta de Andalucía. Julio Gálvez. 2020-2021. 75.000 €. Team member.

10 **Project**. PI18/00040, Identificación de los mecanismos patogénicos implicados en el desarrollo de la arteritis de células gigantes mediante secuenciación del transcriptoma de células T individuales. Instituto de Salud Carlos III (ISCIII). Ana María Márquez Ortiz. (Fundación Pública Andaluza para la investigación Biosanitaria Andalucía Oriental (FIBAO)). 2019-2021. 87.120 €. Principal investigator.

11 **Project**. CP17/00008, Study of the molecular basis of giant cell arteritis by integrating genomic, transcriptomic and methylation data. Instituto de Salud Carlos III (ISCIII). Ana María Márquez Ortiz. (Fundación Pública Andaluza para la investigación Biosanitaria Andalucía Oriental (FIBAO)). 2018-2021. 100.000 €. Principal investigator.