

CV Date

22/12/2025

Part A. PERSONAL INFORMATION

First Name	Gema		
Family Name	Moreno Bueno		
Sex	Female	Date of Birth	
ID number Social Security, Passport			
URL Web			
Email Address			
Open Researcher and Contributor ID (ORCID)	0000-0002-5030-6687		

A.1. Current position

Job Title	Head of the Translational Cancer Research lab & Full professor		
Starting date	2022		
Institution	Fundación MD Anderson International España & Universidad Autónoma de Madrid		
Department / Centre			
Country	Spain	Phone Number	
Keywords	Biomedicine; Molecular, cellular and genetic biology		

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

Period	Job Title / Name of Employer / Country
2012 - 2022	Associate Professor / Universidad Autónoma de Madrid / Spain
2015 - 2015	Visiting Faculty from MD Anderson Cancer Center Madrid, Spain / The University of Texas. MD Anderson Cancer Center / United States of America
2009 - 2011	Hired Professor Doctor / Universidad Autónoma de Madrid / Spain
2007 - 2009	Researcher of the Ramón y Cajal Program, MICINN / Universidad Autónoma de Madrid / Spain
2005 - 2006	Researcher of the Ramón y Cajal Subprogram 2004/ Investigadora del Subprograma Ramón y Cajal (RYC) 2004 / Centro Nacional de Investigaciones Oncológicas / Spain

A.3. Education

Degree/Master/PhD	University / Country	Year
Advanced Bioinformatics Course on Next Generation Sequencing (NGS)	Universidad Complutense de Madrid / Spain	2012
Bioinformatics & Computational Biology Master	Universidad Complutense de Madrid-Centro Nacional de Biotecnología / Spain	2006
PhD in Biochemistry & Cellular Biology	Universidad Autónoma de Madrid	1999
BSc in Biochemistry and Molecular Biology	Universidad Autónoma de Madrid / Spain	1994

Part B. CV SUMMARY

My research has focused on understanding the tumor resistance mechanisms and developing innovative therapeutic strategies for various types of cancer, with a particular focus on breast and gynecological tumors. I have built a highly productive scientific career, contributing to 161 Scientific Publications (141 Scientific Articles, 20 Reviews) in international peer-reviewed journals and 3 Book Chapters. These have accumulated an impact factor of 1,013.901 and more than 16,000 citations to date, with an h-index of 63. I have presented my

research at more than 110 congresses, and have five patents (For more details, please see <https://www.ncbi.nlm.nih.gov/myncbi/gema.moreno-bueno.1/bibliography/public/>). I graduated in Biochemistry and Molecular Biology in 1994 (UAM) and obtained a Master in Bioinformatics & Computational Biology (UCM, 2005 and 2012). I was awarded high honors for my PhD thesis in Molecular Biology in 1999. I joined the Pathology Department (La Paz Hospital) in 1999 and the Molecular Pathology Program at the CNIO in 2000, where I became a Staff member in 2005. In 2005, I was awarded the highly competitive Ramón y Cajal contract (MICINN) to work on the characterization of novel biomarkers of resistance to therapy in cancer. In 2007, I moved to the Biochemistry Department at UAM, where I continue to lead my own research group. I have conducted research stays including at the Max Planck Institute (Munich, 1996) and the MD Anderson Cancer Center (Houston, 2015). I was appointed to the Biochemistry Department at UAM, first as Associate Professor (2012) and later as Full Professor (2022). Since 2007, I have consistently secured funding from a range of public and private national and international agencies, including ERA-Permed, ISCIII, MICINN, DTS and AECC, among others. As PI, I have authored 127 manuscripts (7 as first author and 32 as last or corresponding author). In addition, I have been involved in the supervision of numerous undergraduate, masters, PhD and postdoctoral students. Most of the PhD students and postdocs I have supervised have successfully continued their careers. Currently, I am a member of the main Spanish cancer research consortia such as CIBERONC (PI since 2021, Breast and Gynaecology Program Coordinator 2025, and Training and Mobility Program Coordinator); Cancer Hub-CSIC (member of the Scientific Committee since 2023); GEICAM (member of the TransGEICAM Working Group, since 2024); Inflammation Network (funded by MICINN-AEI, RED2022-134511-T (since 2023) and PI of an IRYCIS group within Cancer Area 3 (since 2024), among others. I am also Head of the Translational Cancer Research Laboratory and Molecular Diagnostics Unit at MD Anderson Cancer Center Madrid (since 2010), Adjunct Professor at MD Anderson Cancer Center-University of Texas, Hx US (since 2015) and Trustee of the AECC Scientific Foundation (since 2022). I have been a member of the ASEICA Board (2016-2024, Treasurer 2018-2024, Coordinator of ASEICA-woman 2023-2024 and of ASEICA-learn 2020-2024) and a permanent member of the Review Panel of the Biomedicine-Cancer Area within the AEI (MICINN, 2019-2024). I regularly collaborate with various patient associations to disseminate scientific results to non-academic audiences. I received the "With a Woman's Name" award for outstanding participation in CONÓCELAS 2022 and 2023 (Merck Health Foundation-ASEICA Awards for the Promotion of Scientific Vocations).

Part C. RELEVANT ACCOMPLISHMENTS

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

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

- 1 **Scientific paper**. Rodríguez-Baena FJ; Marquez-Galera A; Ballesteros-Martínez P; Castillo A; Díaz E; (6/8) Moreno-Bueno G; Lopez-Atalaya JP; Sanchez-Laorden B. 2025. Microglial reprogramming enhances antitumor immunity and immunotherapy response in melanoma brain metastases. *Cancer cell*. ISSN 1535-6108. <https://doi.org/10.1016/j.ccell.2025.01.008>
- 2 **Scientific paper**. García-Estévez L; González-Rodríguez M; Calvo I; Orta A; Gíón M; (6/8) Moreno-Bueno G; Manuel Pérez-García J; Cortés J. 2025. Obesity, overweight and breast cancer: new clinical data and implications for practice. *Frontiers in Oncology*. <https://doi.org/10.3389/fonc.2025.1579876>
- 3 **Scientific paper**. M Morillo-Huesca; I G López-Cepero; R Conesa-Bakkali; et al; J Martínez-Fábregas; (7/9) G Moreno-Bueno. 2025. Radiotherapy resistance driven by Asparagine endopeptidase through ATR pathway modulation in breast cancer. *Journal of experimental & clinical cancer research* : CR. 44, pp.74. ISSN 0392-9078. PUBMED (85) <https://doi.org/10.1186/s13046-025-03334-6>

- 4 **Scientific paper.** Lado-Fernández P; Vilas JM; Fernandes T; et al; Collado M; (12/14) Moreno-Bueno G. 2025. Transcriptional repression of SOX2 by p53 in cancer cells regulates cell identity and migration. *International journal of cancer*. <https://doi.org/10.1002/ijc.35490>
- 5 **Scientific paper.** Youssef KK; Narwade N; Arcas A; et al; Nieto MA; (11/13) Moreno-Bueno G. 2024. Two distinct epithelial-to-mesenchymal transition programs control invasion and inflammation in segregated tumor cell populations. *Nature cancer*. 5, pp.1660-1680. WOS (2) <https://doi.org/10.1038/s43018-024-00839-5>
- 6 **Scientific paper.** Casas-Arozamena C; Vilar A; Cueva J; et al; Muinelo-Romay L; (25/26) Moreno-Bueno G (AC). 2024. Role of cfDNA and ctDNA to improve the risk stratification and the disease follow-up in patients with endometrial cancer: towards the clinical application. *Journal of experimental & clinical cancer research* : CR. 43, pp.264. ISSN 0392-9078. WOS (42) <https://doi.org/10.1186/s13046-024-03158-w>
- 7 **Scientific paper.** Moreno-Moreno E; Caniego-Casas T; Carretero-Barrio I; et al; Pérez-Mies B; (8/11) Moreno-Bueno G. 2024. Histologic and Molecular Type Changes in Endometrial Cancer Recurrences in Comparison With Their Corresponding Primary Tumors. *The American journal of surgical pathology*. ISSN 0147-5185. Pubmed (36) <https://doi.org/10.1097/PAS.0000000000002308>
- 8 **Scientific paper.** Rosas-Alonso R; Colmenarejo-Fernández J; Pernía O; et al; de Cáceres II; (19/21) Moreno-Bueno G. 2024. Evaluation of the clinical use of MGMT methylation in extracellular vesicle-based liquid biopsy as a tool for glioblastoma patient management. *Scientific reports*. 14, pp.11398. Pubmed (53) <https://doi.org/10.1038/s41598-024-62061-8>
- 9 **Scientific paper.** Marugán C; Sanz-Gómez N; Ortigosa B; et al; de Cáncer G; (10/11) Moreno-Bueno G. 2024. TPX2 overexpression promotes sensitivity to dasatinib in breast cancer by activating YAP transcriptional signaling. *Molecular oncology*. ISSN 1574-7891. <https://doi.org/10.1002/1878-0261.13602>
- 10 **Review.** Ostrowska-Lesko M; Rajtak A; (3/4) Moreno-Bueno G; Bobinski M. 2024. Scientific and clinical relevance of non-cellular tumor microenvironment components in ovarian cancer chemotherapy resistance. *Biochim Biophys Acta Rev Cancer*. <https://doi.org/10.1016/j.bbcan.2023.189036>

C.3. Research projects and contracts

- 1 **Project.** Improving the treatment of HER2 breast cancer brain metastasis with a targeted nanotherapy (nano_HER2BRAIN). Fundación Contigo Contra el Cáncer de la Mujer. (Fundación MD Anderson & Universidad Autónoma de Madrid). 05/2025-04/2028. 167.400 €. Principal investigator.
- 2 **Project.** Validación de variantes genéticas implicadas en el comportamiento clínico del cáncer de mama y endometrio. Acrónimo: VarianCan/ Validation of gene variants implicated in the clinical behavior of breast and endometrial cancer. Acronym: VarianCan. Fundación Contigo Contra el Cáncer de la Mujer. (Universidad Autónoma de Madrid). 01/01/2025-31/12/2027. 80.000 €. Principal investigator.
- 3 **Project.** METABRAIN TOX: Targeting HER2 breast cancer brain metastasis with a novel nanotherapy. Asociación Española Cáncer de Mama Metastásico de España (AECMM). (Fundación MD Anderson & Universidad Autónoma de Madrid). 01/2025-02/2027. 50.000 €. Principal investigator.
- 4 **Project.** SNRGS259715TUBI, Preclinical study of the combination of anti-HER2 therapies and PARP inhibitors in HRD-HER2 positive endometrial cancer/ Estudio preclínico de la combinación de terapias anti-HER2 e inhibidores de PARP en el cáncer de endometrio HER2 positivo con Deficiencia de Recombinación Homóloga (HRD). FUNDACION CIENTIFICA ASOCIACION ESPAÑOLA CONTRA EL CANCER. Moreno-Bueno, Gema (Consolidated group leader); Tubita, Valeria (PI). (Vall d'Hebron Research Institute & Fundación MD Anderson). 2026-2027. 20.000 €. Consolidated group leader.

- 5 **Project.** PID2022-136854OB-I00, Impact of the functional crosstalk between GSDMB and GSDMD in HER2 breast cancer genesis, progression, and therapy response (CrossGasdermin)/ Impacto de la interrelación funcional entre GSDMB y GSDMD en la carcinogénesis, progresión. Ministerio de Ciencia e Innovación. Gema Moreno Bueno. (Universidad Autónoma de Madrid). 01/09/2023-31/08/2026. 343.750 €. Principal investigator.
- 6 **Project.** PMP22/00054, Exploring the Feasibility of predictive and pharmacodynamics biomarkers of immunotherapy in solid tumors (Immune4ALL). Instituto de Salud Carlos III. Enrique de Alava (Coordinator). (CIBERONC). 12/2022-06/2026. 4.992.900 €. CoPI-WP1 and PI-WP6.
- 7 **Project.** ERAPERMED2021-076 ECLAI (Consortium). PERME212426MORE (Group CIBERONC), Personalized Clinical Management of Endometrial Cancer using Liquid Biopsy, Genomics and Artificial Intelligence, ECLAI. Fundación Científica de la Asociación Española Contra el Cáncer (FCAECC)/ Instituto de Salud Carlos III (ISCIII). Moreno Bueno, G (Spain). (CIBERONC). 01/01/2022-31/12/2025. 860.684 €. Coordinator & Principal Investigator of Spanish Group. Involved countries Norway, Estonia, Poland and Spain.
- 8 **Project.** PMPTA22/00076, Nuevas estrategias de inmunoterapia para el tratamiento del cáncer de ovario (IMCOV)/ New immunotherapy strategies for the treatment of ovarian cancer (IMCOV). Instituto de Salud Carlos III. Anxo Vidal Figueroa (PI coordinator translational research). (Facultad de Medicina (UAM) y CIBERONC). 01/12/2022-30/06/2025. 272.855 €. Team member.
- 9 **Project.** PDC2022-133252-I00, Validation and valorization of a new gene therapy, nanoGBtox, for the treatment of cancer/ Validación y valorización de una nueva terapia génica, nanogbtox, para el tratamiento del cáncer. Ministerio de Ciencia e Innovación. Moreno-Bueno, G. (Universidad Autónoma de Madrid). 01/2023-01/2025. 149.155 €. Principal investigator.
- 10 **Project.** CB16/12/00295, Consortium CIBERONC. Cancer Area. Breast Cancer Program. Instituto de Salud Carlos III. Moreno-Bueno G. (Universidad Autónoma de Madrid). From 01/01/2017. 418.517 €. Principal investigator.

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

- 1 **Patent of invention.** De La Fuente Freire, María; Lores Touriño, Saínza; Sarrió López, José David; Gamez Chiachio, Manuel; Moreno Bueno, Gema. EP23382104.0. Fragments of the N-Terminal domain of GSDMB for the treatment of cancer 03/02/2023. UAM; CIBER; CHUS.
- 2 **Patent of invention.** Matias Guiu FJ; Dolcet Roca FJ; Reventós Puigjaner J; Colás Ortega E; Praz Díaz de Losada J; Palacios Calvo J; Abal Pôsa M; López López R; Moreno-Bueno G. 14155510.2-1405 (EPO). Method to predict risk of recurrence in endometrial carcinoma. Spain. 18/02/2014. Recerca Biomèdica de Lleida Fundació Doctor Pifarré; SSPA-Sevilla; Fundació Hospital Universitari Vall d'Hebron-Institut de Recerca-Barcelona; SERGAS-Santiago de Compostela; MD Anderson Foundation.
- 3 **Patent of invention.** Hergueta Redondo M; García Sanz P; Rojo-Sebastian A; García García JF; Moreno-Bueno G; Consejo Superior de Investigaciones Científicas; Universidad Autónoma de Madrid. P201231560. La isoforma GSDMB2 como biomarcador de malignidad y de resistencia al fármaco inhibidor del receptor ErbB2/Her2neu Trastuzumab/ The GSDMB2 isoform as a biomarker of malignancy and resistance to the ErbB2/Her2neu receptor inhibitor Trastuzumab Spain. 10/10/2012. Fundación MD Anderson; FUAM; CSIC.
- 4 **Patent of invention.** García García JF; Martín Moreno AM; Roncador G; Martínez Torrecuadra JL; Moreno-Bueno G. P201231304. Anticuerpo y método para el diagnóstico y/o pronóstico de linfomas/ Antibody and method for the diagnosis and/or prognosis of lymphomas Spain. 14/08/2012. Fundación MD Anderson; Centro Nacional de Investigaciones Oncológicas.
- 5 **Patent of invention.** Olmeda D; Moreno-Bueno G; Portillo F; Cano A. P200702342; N° of publication: ES2322834. Método de diagnóstico y/o pronóstico de cáncer de mama/ Method of diagnosis and/or prognosis of breast cancer Spain. 28/08/2007. Universidad Autónoma de Madrid.