



Part A. PERSONAL INFORMATION

CV date

23/07/2025

First name	Ana María		
Family name	Zubiaga Elordieta		
Gender (*)		Birth date	
Social Security, Passport, ID number			
e-mail		URL Web	
Open Researcher and Contributor ID (ORCID) (*)			

(*) Mandatory

A.1. Current position

Position	Catedrática de Universidad		
Starting date	25-11-2010		
Institution	Universidad del País Vasco / Euskal Herriko Unibertsitatea		
Department/Center	Genetics, Physical Anthropology and Animal Physiology		
Country	Spain	Phone number	
Key words	Cancer, immunity, gene expression, cell cycle, mouse models, E2F/RB pathway, genetic instability, proteomics		

A.2. Previous positions (research activity interruptions, art. 14.2.b))

Period	Position/Institution/Country/Interruption cause
2014-2015	Visiting Scholar/ University of California-San Diego (USA)
1999-2010	Profesora Titular/ UPV-EHU
1997-1999	Profesora Titular (interina)/ UPV-EHU
1995-1997	Profesora Asociada/ UPV-EHU - maternity leave
1990-1994	Postdoctoral Fellow/ Harvard University (USA) - maternity leave
1986-1990	Postdoctoral Research Associate/ Tufts University (USA)
1983-1986	Profesora Colaboradora/ UPV-EHU
1982-1983	PhD student / UPV-EHU

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
BSc in Biological Sciences	Universidad del País Vasco / Euskal Herriko Unibertsitatea	1981
PhD in Biological Sciences	Universidad del País Vasco / Euskal Herriko Unibertsitatea	1986

Part B. CV SUMMARY (max. 5000 characters, including spaces)

I completed my PhD in Biological Sciences at the UPV/EHU (1982-86), and pursued postdoctoral research at Tufts University (1986-89, under Dr. Brigitte Huber), and Harvard University (1990-94, under Dr. Michael Greenberg) in the field of genetic regulation of cell proliferation, focusing on the mechanisms that regulate the immune response and the role of cellular oncogenes. The results of these investigations were published in high impact journals such as *Cell*, *J Exp Med*, *PNAS*, *J Immunol*.

In 1995 I joined the UPV/EHU as a faculty member. I am currently a Full Professor of Genetics with teaching responsibilities at both undergraduate and graduate levels. I have been awarded 6 research *sexenios* and 6 teaching *quinquenios* in recognition of my contributions.

Since my recruitment at the UPV/EHU I have led an independent research group, continuously funded as a principal investigator by national, regional and local agencies. This includes participation in CONSOLIDER-Ingenio (2007-12) and Thematic Networks (2015-16, 2020-26) projects, in collaboration with prominent Spanish research groups. I lead a consolidated research group funded by the Basque Government since 2001, composed of professors, Ikerbasque researchers as well as pre- and postdoctoral researchers.

My research interests stand at the confluence of Cancer Biology and Genetics, with a focus on the Retinoblastoma/E2F pathway in cell cycle regulation and cell fate decisions. Experimental designs in my research involve a combination of *in vitro* cell models, genome-wide genomics and proteomics, and molecular biology, along with *in vivo* animal genetic models. My group has contributed significantly to the field with several relevant publications over the years (*Immunity* 2001, *J Clin Invest* 2004, *NAR* 2013, 2016, 2018, *Cell Death Differ* 2015, *Cancer Res* 2021), in which we have characterized the physiological and pathological roles of E2F family members, and dissected the mechanisms underlying their transcriptional activity. I have presented our findings at international conferences in the area of Cancer and Molecular Biology and I have been invited to give numerous research seminars. I am also engaged in science outreach activities, including talks (*NAUKAS*, *Cátedra de Cultura Científica*, *Jakin Mina*), contributions to science magazines (*Elhuyar*) and participation in radio and TV programs (*EITB*, *Radio Euskadi*).

I have supervised 19 doctoral theses, 7 of which have been successfully defended in the last 10 years, as well as with 6 postdoctoral researchers and over 20 master's students. Many of those I have mentored have gone on to further their scientific training or have secured independent research positions, which I believe reflects my commitment to their professional development. I am currently supervising 4 PhD students and have participated in more than 80 thesis tribunals of Spanish and international universities.

I have established a broad network of collaborators both nationally (e.g. CNIO, IRB, University of Cantabria) and internationally (e.g. NKI, Heidelberg U., Karolinska Institute, University of North Carolina, U. Milano). These collaborations involve the exchange of protocols and reagents, as well as extended research visits by members of my team to these institutions. Additionally, I have been invited to join the ENLIGHT-Cancer Network initiative, a university alliance comprising ten leading research-intensive European institutions.

Since 2024, I have served as the President of the Basque Academy of Sciences, Arts and Letters *JAKIUNDE*. I have also received the Cadena Ser-Radio Bilbao Award to Excellence in Research (2018) and the Elhuyar-CAF Merit Award (2020).

Part C. RELEVANT MERITS (sorted by typology)

C.1. Relevant Publications (* corresponding author)

1. Apodaka-Biguri M, Simão AL, ... Zubiaga AM (31/33). E2F2 Transcription Factor promotes a cholestatic MASH phenotype by regulating hepatobiliary metabolism through miR-34a-5p. Accepted in **Hepatology**.
2. Fullaondo A, Zalduendo M, ..., Zubiaga AM (6/6). Impact of increasingly complex cell culture conditions on the proteome of human periodontal ligament stem cells. **Regen Med**. 2025 Jan 4:1-14 (2025)
3. Anitua E, Troya M, ..., Zubiaga AM (8/8). The interplay of human-derived periodontal ligament stem cells, endothelial cells and plasma rich in growth factors. **Biomed Pharmacother**. 174:116599 (2024)
4. Omaetxebarria MJ, Sendino M, ...Zubiaga AM (5/6). Mutations of Key Functional Residues in CRM1/XPO1 Differently Alter Its Intranuclear Localization and the Nuclear Export of Endogenous Cargos. **Biomolecules**. 14(12):1578 (2024)
5. Hamidi# M, Eriz# A, Mitxelena J, ...Iglesias-Ara* A, Zubiaga* AM (8/8) (*co-corresponding authors; #co-first authors). Targeting E2F sensitizes prostate cancer cells to drug-induced replication stress by promoting unscheduled CDK1 activity. **Cancers**. Oct 10;14(19):4952 (2022)
6. Mustafa N, Mitxelena J, ...Iglesias-Ara* A, Zubiaga* AM (7/7) (* co-corresponding authors) (7/7). E2f2 attenuates apoptosis of activated T lymphocytes and protects from immune-mediated injury through repression of Fas and FasL. **Int J Mol Sci** Dec 28;23(1):311 (2021)
7. González-Romero F, Mestre D, ... Zubiaga AM (34/35). E2F1 and E2F2-Mediated Repression of CPT2 Establishes a Lipid-Rich Tumor-Promoting Environment. **Cancer Res**. 81(11):2874-2887 (2021)
8. García-Santisteban I, Llopis A, Krenning L, van den Broek B, Zubiaga* AM, Medema* RH. (* co-corresponding authors). (5/6). Sustained CHK2 activity, but not ATM activity, is critical to maintain a G1 arrest after DNA damage in untransformed cells. **BMC Biol**. Feb 19;19(1):35 (2021)
9. Mitxelena J, Apraiz A, ... Zubiaga* AM. (8/8) An E2F7-dependent transcriptional program modulates DNA damage repair and genomic stability. **Nucleic Acids Res**. 46:4546-4559 (2018)

10. Mitxelena J, Apraiz A, Vallejo-Rodríguez J, Malumbres M, Zubiaga* AM. (5/5) E2F7 regulates transcription and maturation of multiple microRNAs to restrain cell proliferation. **Nucleic Acids Res.** 44: 5557–5570 (2016)
11. Iglesias-Ara A, Zenarruzabeitia O, ... Zubiaga* AM. (5/5) E2F1 and E2F2 prevent replicative stress and subsequent p53-dependent organ involution. **Cell Death Differ.** 22(10):1577-1589. doi: 10.1038/cdd.2015.4 (2015)
12. Laresgoiti U, Olea M, ... Zubiaga* AM. (7/7) E2F2 and CREB cooperatively regulate transcriptional activity of cell cycle genes. **Nucleic Acids Res.** 41:10185-10198 (2013)
13. Ainhoa Iglesias A, Murga M,... Zubiaga AM (11/11). Diabetes and exocrine pancreatic insufficiency in E2F1/E2F2 double-mutant mice. **J Clin Invest.** 113:1398-407 (2004)
14. Murga, M; Fernández-Capetillo, O ... Zubiaga* AM. (12/12) Mutation of E2F2 in mice causes enhanced T lymphocyte proliferation, leading to the development of autoimmunity. **Immunity.** 15: 959-970 (2001)

C.2. Conferences (Selected)

Invited conference: Zubiaga AM. Mechanisms of cell cycle regulation and genome stability governed by E2F transcription factors. 1st Cancer ENLIGHT Meeting. Bordeaux (France) 2023.

Poster: Hamidi M, Eriz A, Fernández-Ares L, Mitxelena J, Iglesias-Ara A, & Zubiaga AM. Combined inhibition of E2F and thymidylate synthase is highly efficient in boosting metastatic prostate cancer cell apoptosis. EACR 2022 Congress. Sevilla 2022.

Poster: Iglesias-Ara A, Mustafa N, Zenarruzabeitia O, Eriz A, Madariaga E, Buelt L, Merino J & Zubiaga AM. E2F2 and p53 Work in Concert to Prevent Replication Stress in T Lymphocytes. 11th Salk Institute Cell cycle Virtual Meeting. San Diego (EEUU). 2021.

Oral Presentation: Vallejo-Rodríguez J, Mitxelena J, Apraiz A, Fullaondo A, Alvarez-Fernández M, Malumbres M, Zubiaga AM. An E2F7-dependent transcriptional program modulates DNA damage repair and genomic stability. 42nd FEBS Congress. Jerusalem (Israel) 2017.

Oral Presentation: García-Santisteban I, Llopis A, van den Broek B, Medema RH & Zubiaga AM. A functional screen identifies novel phosphatases required for checkpoint recovery in G1. Joint Congress of the Spanish Society of Cell Biology and the Spanish Society of Developmental Biology. Gijón, 2017.

Poster: Vallejo-Rodríguez J, Mitxelena J, Apraiz A, Malumbres M & Zubiaga A.M. E2F7 regulates transcription and maturation of multiple microRNAs to restrain cell proliferation. 24th Biennial Congress of the European Association for Cancer Research. Manchester (UK) 2016.

Invited conference: Zubiaga, AM. Oncogenic and anti-oncogenic roles of E2F transcription factors. 20th World Congress on Advances in Oncology. Athens (Greece) 2015.

C.3. Research projects

1. “Mecanismos de respuesta al daño del DNA y de progresión tumoral regidos por nuevas redes de regulación transcripcional asociadas a los factores E2F”. MICIU. Ref.: PID2021-122922OB-I00. 07/2022-07/2025. IP: Ana M^a Zubiaga. 272.250€ and FPI fellowship associated to the project.
2. GRUPO CONSOLIDADO: “Bases moleculares de patologías humanas de alta prevalencia: cáncer e infertilidad. Avanzando (en medicina de precisión) hacia un manejo personalizado del paciente”. Gobierno Vasco. Depto. Educación. Ref.: IT1547-22. 01/2022-12/2025. IP: Ana M^a Zubiaga. 285.600 €
3. RED TEMÁTICA “Proliferación y diferenciación celular: mecanismos y relevancia patológica”. MICIU. Ref.: RED2024-153635-T. 01/2025-12/2026. Coordinator network (13 groups): Marcos Malumbres. PI group: Ana M^a Zubiaga. 22.000 € total
4. “MATRIXBIOCELL-Desarrollo, caracterización y optimización de modelos celulares multicapa en el marco de una terapia avanzada 100% autóloga para su aplicación en ingeniería tisular”. Gobierno Vasco, Depto. Desarrollo Económico. 01/2020-12/2021. Ref.: KK-2020/00014. PI: Ana M^a Zubiaga. 52.930 €
5. RED TEMÁTICA “Balance entre proliferación y diferenciación: mecanismos y relevancia en patología humana”. MICIU. Ref.: RED2018-102723-T. 01/2020-12/2022. Coordinator network (10

groups): Marcos Malumbres. PI group: Ana M^a Zubiaga. 20.000 € total

6. “Revisando el papel de los factores E2F en el desarrollo tumoral: estudio de la conexión E2F-EMT”. Ministerio de Ciencia y Universidades. Ref.: RTI2018-097497-B-I00. 01/2019-12/2021. PI: Ana M^a Zubiaga. 181.500 €
7. “GRUPO CONSOLIDADO: Biología celular y molecular del cáncer”. Gobierno Vasco, Dpto. Educación. Ref.: IT1257-19. 01/2019-12/2021. PI: Ana M^a Zubiaga. 268.305 €
8. “Relevancia fisiológica de los factores E2F más allá de la regulación del ciclo celular”. Ministerio de Economía y Competitividad. Ref.: SAF2015-67562-R. 01/2016-12/2018. Extended 30-06-19 PI: Ana M^a Zubiaga. 193.000 €
9. “Investigación colaborativa en reconocimiento molecular en el contexto de la patología común y de las enfermedades raras”. Gobierno Vasco, Dpto. Desarrollo Económico y Competitividad. Ref.: KK-2015/89. 01/2015-12/2016. PI: Ana M^a Zubiaga. 54.056 €
10. “Caracterización funcional y mecanismos de acción de los factores de transcripción típicos y atípicos de la familia E2F”. Ministerio de Economía y Competitividad. Ref.: SAF2012-33551. 01/2013-12/2015. PI: Ana M^a Zubiaga. 152.000 €
11. “GRUPO CONSOLIDADO: Mecanismos moleculares implicados en la alteración de la homeostasis celular: perspectivas para la terapia del cáncer”. Gobierno Vasco, Dpto. Educación. Ref.: IT634-13. 01/2013-12/2018. PI: Ana M^a Zubiaga. 353.599 €

C.4. Evaluation activities

- Member of the Coordination and Evaluation team of the Spanish National Agency of Evaluation and Prospective (ANEP), area of Cellular-Molecular Biology and Genetics (2005-2009).
- Member of the Coordination and Evaluation team of the Spanish National Agency of Research (AEI), area of Biomedicine (2015-2018 and 2021-present).
- Member of the Research Evaluation Commission of the Agency for the Quality of the University System of Catalonia. Area of Medical and Health Sciences (2019-2024).
- Reviewer *ad hoc* of research grant applications for MINECO Plan Nacional i+d, Netherlands Cancer Institute, Fundación Progreso y Salud, Juan de la Cierva, Ramón y Cajal.
- Participation in over 80 Doctoral Thesis Committees in Spanish and international universities.
- Referee of international journals: J Clin Invest, Cell Signaling, PlosOne, FEBS Lett, Exp Cell Res, Carcinogenesis, Nat Commun...

C.5. Institutional Responsibilities

- Elected member of the UPV/EHU Research Committee from 2006 until 2009; Postgraduate Committee from 2013 until 2014; Ethics and Animal Welfare Committee from 2009 until 2014.
- Coordinator of the Doctoral Degree Program with quality award recognition “*Advances in Molecular Genetics*” from 2005 until 2010; Coordinator of the Interuniversity Master Degree Program “*Molecular Biology and Biomedicine*” from 2008 until 2014.
- Member of the “*Molecular Biology and Biomedicine*” Doctoral Degree committee from 2013 until present.
- Director of the UPV/EHU Research and Training Unit *Cluster in Molecular Biomedicine Education and Research* (over 40 investigators) from 2011 until 2017.
- Supervisor of the Genomics Facility at the UPV/EHU from 2003 until 2015.
- President of the Basque Academy of Sciences, Arts and Letters *JAKIUNDE*, since 2024. Appointed member since 2018.
- Elected member of the UPV/EHU University Faculty since 2020.

C.6. Scientific advisory boards

- Member of the Scientific Advisory Board of IDIVAL Health Research Institute (Santander) from 2011 until present.
- Member of the Scientific Advisory Board of the Institute of Biomedicine & Biotechnology of Cantabria (Santander) from 2016 until present.
- Elected member of the Directive Board of the Spanish Association for Cancer Research (ASEICA) from 2007 until 2010.