

CV Date	06/05/2024
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Part A. PERSONAL INFORMATION

First Name	Raquel		
Family Name	Tarazona Lafarga		
Sex	Female	Date of Birth	
ID number Social Security, Passport			
URL Web	f5019fc57846e6653e019d8862e2c982		
Email Address			
Open Researcher and Contributor ID (ORCID)	0000-0002-2926-6377		

A.1. Current position

Job Title	Catedrático de Universidad (Full Professor)		
Starting date	2018		
Institution	Universidad de Extremadura		
Department / Centre	Fisiología, Unidad de Inmunología / Facultad de Veterinaria		
Country		Phone Number	
Keywords	241200 - Immunology		

Part B. CV SUMMARY

Raquel Tarazona Lafarga is Professor of Immunology at the University of Extremadura. She obtained her Degree of Medicine (1986) and her PhD degree (1992) at Complutense University of Madrid. From 1987 to 1991 she had a Predoctoral Fellowship for the Training of Research Staff of the Ministry of Science and Education (FPI) with 2 short stays at the Moredun Research Institute in Edinburgh. From 1993 to 1996 she had a Marie Curie postdoc contract from the European Union at the National Institute for Medical Research (Mill Hill) in London. In October 1996, she got a 3 year "Reincorporation Contract" from the Ministry of Education and Science (area of Immunology at the University of Córdoba). From 1999 to 2002 she obtained a FIS contract for researchers, (currently termed Miguel Servet contracts) at Dept. Immunology, Reina Sofía University Hospital in Córdoba. In 2002 she obtained a "Ramón y Cajal" contract from the Ministry of Science and Technology. In the same year she obtained the position of "Professor Titular de Universidad" in Immunology and in August 2018 a Full Professor position at the University of Extremadura. She has a positive evaluation of 5 six-year research periods (1990-2020) and is the coordinator of the Research Group "Tumor Immunopathology" from Junta de Extremadura.

Scientific contributions. Since 2000 and continuously to the present, she has been Principal Investigator of 6 projects of national calls and 7 projects of the Autonomous Community of Extremadura. She is co-author of 2 national patents (2222769 and 2198203) and one of European scope (Application Number: PCT/EP2012/054251). At the University of Córdoba, she participated as a member of the research team led by Prof. Rafael Solana in three European calls, ImAginE and T-CIA (coordinated by Prof. Pawelec) and OISTER (coordinated by Prof. Schadendorf). In recent years her research has focused on the analysis of the interactions between tumor cells and NK cells, analyzing inhibitory receptors such as TIGIT, TIM3, LAG3 and PD1 expressed on NK cells and cytokine-induced cytokine (CIK) cells in patients with acute myeloid leukemia. According to the ISI Web of Science bibliometric analysis (January 2023): she is co-author of 78 scientific articles in indexed journals (39 as first, last, or corresponding author; h index: 32; Total number of citations: 3442; Average number of citations per item: 47,26. In the period 2012-2022: 43 publications (23 as first, last, or corresponding author). Total number of citations: 1956. Average number of citations per item: 48,33. She is co-author of 10 book chapters and has directed 5 PhD theses (4 in the last 10 years).

Contributions to society. Since her incorporation to de University of Extremadura she has participated in 4 collaborations with different industries. Currently, she has a collaboration with

Fundación Pethema (Programa Español de Tratamientos en Hematología) related to the study of NK cells in AML patients.

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.** Valhondo, Isabel; Hassouneh, Fakhri; Lopez-Sejas, Nelson; et al; (17/17) Tarazona, Raquel. 2020. Characterization of the DNAM-1, TIGIT and TACTILE Axis on Circulating NK, NKT-Like and T Cell Subsets in Patients with Acute Myeloid Leukemia. *CANCERS*. 12. WOS (8) <https://doi.org/10.3390/cancers12082171>
- 2 **Scientific paper.** (1/11) Tarazona, Raquel; Lopez-Sejas, Nelson; Guerrero, Beatriz; et al; Solana, Rafael. 2020. Current progress in NK cell biology and NK cell-based cancer immunotherapy. *CANCER IMMUNOLOGY IMMUNOTHERAPY*. 69. ISSN 0340-7004. <https://doi.org/10.1007/s00262-020-02532-9>
- 3 **Scientific paper.** Guerrero, B.; Hassouneh, F.; Delgado, E.; Casado, J.G.; (5/5) Tarazona, R. (AC). 2020. Natural killer cells in recurrent miscarriage: An overview. *Journal of reproductive immunology*. 142, pp.103209.
- 4 **Scientific paper.** Beatriz Sanchez-Correa; Isabel Valhondo; Fakhri Hassouneh; et al; (13/13) Raquel Tarazona (AC). 2019. DNAM-1 and the TIGIT/PVRIG/TACTILE Axis: Novel Immune Checkpoints for Natural Killer Cell-Based Cancer Immunotherapy. *CANCERS*. 11-6. WOS (72) <https://doi.org/10.3390/cancers11060877>
- 5 **Scientific paper.** Marinaro, F.; Sanchez-Margallo, FM.; Alvarez, V.; Lopez, E.; (5/8) Tarazona, R.; Brun, MV; Blazquez, R.; Casado J.G. 2019. Meshes in a mess: Mesenchymal stem cell-based therapies for soft tissue reinforcement. *Acta Biomaterialia*. 85, pp.60-74.
- 6 **Scientific paper.** Beatriz Sanchez-Correa; Nelson Lopez-Sejas; Esther Duran; Fernando Labella; Corona Alonso; Rafael Solana; (7/7) Raquel Tarazona. 2019. Modulation of NK cells with checkpoint inhibitors in the context of cancer immunotherapy. *Cancer Immunology Immunotherapy*. 68-5, pp.861-870. ISSN 0340-7004. WOS (28) <https://doi.org/10.1007/s00262-019-02336-6>
- 7 **Scientific paper.** Almeida, Jani-Sofia; Couceiro, Patricia; Lopez-Sejas, Nelson; et al; Rodrigues-Santos, Paulo; (6/10) Tarazona, Raquel. 2019. NKT-Like (CD3+CD56+) Cells in Chronic Myeloid Leukemia Patients Treated With Tyrosine Kinase Inhibitors. *FRONTIERS IN IMMUNOLOGY*. 10. ISSN 1664-3224. <https://doi.org/10.3389/fimmu.2019.02493>
- 8 **Scientific paper.** Rodrigues-Santos, P.; López Sejas, N.; Almeida, JS; et al; Santos-Rosa, M.; (9/12) Tarazona, R. 2018. Effect of Age on NK Cell Compartment in Chronic Myeloid Leukemia Patients Treated With Tyrosine Kinase Inhibitors. *Frontiers in Immunology*. 9, pp.2587.
- 9 **Scientific paper.** Hassouneh, F.; López Sejas, N.; Campos, C.; Sánchez Correa, B.; (5/7) Tarazona, R.; Solana, R.; Pera, A. 2017. Differential Effect of Cytomegalovirus Infection with Age on the Expression of CD57, CD300a, and CD161 on T-Cell Subpopulations. *Frontiers in Immunology*. 8, pp.649.
- 10 **Scientific paper.** (1/15) Tarazona, R. (AC); Sánchez Correa, B.; Casas-Avilés, I; et al; Solana, R. 2017. Immunosenescence: limitations of natural killer cell-based cancer immunotherapy. *Cancer Immunology Immunotherapy*. 66-2, pp.233-245. WOS (18)
- 11 **Scientific paper.** (1/3) Tarazona, R.; Duran, E.; Solana, R. 2016. Natural Killer Cell Recognition of Melanoma: New Clues for a More Effective Immunotherapy. *Frontiers in immunology*. 6, pp.649. ISSN 1664-3224.
- 12 **Scientific paper.** Sanchez Correa, B.; Campos, C.; Pera, A.; et al; (11/11) Tarazona, R. 2016. Natural killer cell immunosenescence in acute myeloid leukaemia patients: new targets for immunotherapeutic strategies?. *Cancer immunology, immunotherapy*. 65-4, pp.453-516. ISSN 1432-0851. WOS (26) <https://doi.org/10.1007/s00262-015-1720-6>

- 13 **Scientific paper.** Álvarez-Heredia P; Reina-Alfonso I; Domínguez-Del-Castillo JJ; et al; Pera A. 2023. Accelerated T-Cell Immunosenescence in Cytomegalovirus-Seropositive Individuals After Severe Acute Respiratory Syndrome Coronavirus 2 Infection. *The Journal of infectious diseases.* 228, pp.576-585. ISSN 0022-1899. WOS (50) <https://doi.org/10.1093/infdis/jiad119>
- 14 **Scientific paper.** Carreira-Santos S; López-Sejas N; González-Sánchez M; et al; Tarazona R. 2023. Enhanced expression of natural cytotoxicity receptors on cytokine-induced memory-like natural killer cells correlates with effector function. *Frontiers in immunology.* 14, pp.1256404. WOS (65) <https://doi.org/10.3389/fimmu.2023.1256404>
- 15 **Scientific paper.** Almeida JS; Casanova JM; Santos-Rosa M; Tarazona R; Solana R; Rodrigues-Santos P. 2023. Natural Killer T-like Cells: Immunobiology and Role in Disease. *International journal of molecular sciences.* 24. WOS (185) <https://doi.org/10.3390/ijms24032743>
- 16 **Scientific paper.** Nieves; Lorena; Massimo; Luis Javier; Raquel; María Esther. 2021. Comparison between Histological Features and Strain Elastographic Characteristics in Canine Mammary Carcinomas. *Veterinary Sciences.* 9, pp.9.
- 17 **Scientific paper.** Formentini M.; Navas A.; Hassouneh F.; Lopez-Sejas N.; Alonso C.; Tarazona R.; Solana R.; Pera A. 2021. Impact of Cytomegalovirus and Age on T-Cell Subsets Defined by CD161, CD300a, and/or CD57 Expression in Healthy Andalusians. *J Gerontol A Biol Sci Med Sci.* 76-11, pp.1946-1953.
- 18 **Scientific paper.** Pastor, Nieves; Javier Ezquerro, Luis; Santella, Massimo; Caballe, Nuria C.; (5/6) Tarazona, Raquel (AC); Esther Duran, Maria. 2020. Prognostic significance of immunohistochemical markers and histological classification in malignant canine mammary tumours. *VETERINARY AND COMPARATIVE ONCOLOGY.* 18. ISSN 1476-5810. <https://doi.org/10.1111/vco.12603>
- 19 **Scientific paper.** Solana C; Pereira D; (3/3) Tarazona, R. 2018. Early Senescence and Leukocyte Telomere Shortening in SCHIZOPHRENIA: A Role for Cytomegalovirus Infection?. *Brain Sciences.* 8(10), pp.E188.
- 20 **Scientific paper.** Ramos, A.; Míguez, Mdel P.; Morgado, S.; Sanchez Correa, B.; Gordillo, JJ.; Casado, JG.; (7/8) Tarazona, R. (AC); Regodón, S. 2018. Melatonin enhances responsiveness to *Dichelobacter nodosus* vaccine in sheep and increases peripheral blood CD4 T lymphocytes and IgG-expressing B lymphocytes. *Vet Immunol Immunopathol.* 206, pp.1-8.
- 21 **Scientific paper.** Solana C; (2/3) Tarazona, R.; Solana, R. 2018. Immunosenescence of Natural Killer Cells, Inflammation, and Alzheimer's Disease. *Int J Alzheimers Dis.* 2018, pp.3128758.
- 22 **Scientific paper.** Hassouneh, F.; López Sejas, N.; Campos, C.; Sánchez Correa, B.; (5/7) Tarazona, R.; Pera, A.; Solana, R. 2017. Effect of Cytomegalovirus (CMV) and Ageing on T-Bet and Eomes Expression on T-Cell Subsets. *International Journal of Molecular Sciences.* 18.
- 23 **Scientific paper.** Vela, F.J.; Sanchez Margallo, FM.; Blazquez, R.; Alvarez, V.; (5/8) Tarazona, R.; Mangas-Ballester, M.T.; Cristo, A.; Casado, JG. 2017. Evaluation of antigen-induced synovitis in a porcine model: Immunological, arthroscopic and kinetic studies. *BMC Veterinary Research.*
- 24 **Scientific paper.** Sánchez Correa, B.; Bergua, JM.; Pera, A.; et al; (9/9) Tarazona, R. 2017. In Vitro Culture with Interleukin-15 Leads to Expression of Activating Receptors and Recovery of Natural Killer Cell Function in Acute Myeloid Leukemia Patients. *Frontiers in Immunology.* 8, pp.931. ISSN 1664-3224. WOS (19) <https://doi.org/10.3389/fimmu.2017.00931>
- 25 **Scientific paper.** Casado J.G.; Blazquez, R.; Vela, F.J.; Alvarez, V.; (5/6) Tarazona, R.; Sanchez Margallo, FM. 2017. Mesenchymal Stem Cell-Derived Exosomes: Immunomodulatory Evaluation in an Antigen-Induced Synovitis Porcine Model. *Frontiers in Veterinary Science.* 4, pp.39.
- 26 **Scientific paper.** López Sejas, N.; Campos, C.; Hassouneh, F.; Sánchez Correa, B.; (5/7) Tarazona, R.; Pera, A.; Solana, R. 2016. Effect of CMV and aging on the differential expression of CD300a, CD161, T-bet and Eomes on NK cell subsets. *Frontiers in Immunology.* 7, pp.476.

- 27 **Scientific paper.** Campos, C.; López, N.; Pera, A.; Gordillo, JJ.; (5/7) Hassounah, F; Tarazona, R; Solana, R. 2015. Expression of NKp30, NKp46 and DNAM-1 activating receptors on resting and IL-2 activated NK cells from healthy donors according to CMV-serostatus and age. *Biogerontology*. 16-5, pp.671-683. ISSN 1573-6768. WOS(3)
- 28 **Book chapter.** Sanchez Correa, B.; Campos, C.; Pera, A.; Bergua, JM.; Duran, E.; Solana, R.; Tarazona, R. 2018. Age-Associated Alterations on Natural Killer Cells in Acute Myeloid Leukemia Patients. *Handbook of Immunosenescence*. Springer. pp.1-24.
- 29 **Book chapter.** Sanchez Correa, B.; Solana, R.; Tarazona, R. 2018. Aging of Natural Killer Cells in Acute Myeloid Leukemia. *Geriatric Oncology*. Springer.

C.3. Research projects and contracts

- 1 **Project.** Caracterización fenotípica y funcional de células NK “tipo memoria” dirigidas frente al cáncer: Análisis in vitro de las interacciones con células tumorales en un modelo 3D.. Junta de Extremadura. Raquel Tarazona. (Universidad de Extremadura). 17/06/2021-16/06/2024.
- 2 **Project.** SAF2017-87538-R, Células citotóxicas NK y CIK en pacientes con leucemia mieloide aguda: análisis del eje DNAM-1/TIGIT y otros checkpoints para su aplicación en inmunoterapia personalizada.. Ministerio de Ciencia e Innovación. Universidades. Raquel Tarazona. (Universidad de Extremadura). 01/01/2018-31/12/2020. 96.800 €.
- 3 **Project.** IB16164, Identificación de biomarcadores para el diseño de protocolos de inmunoterapia antitumoral basada en células NK. Junta de Extremadura. Raquel Tarazona. (Universidad de Extremadura). 03/06/2017-02/06/2020. 148.997,2 €. Co-ordinator. Investigador principal
- 4 **Project.** SAF2013-46161-R, Caracterización de células Natural Killer y del perfil de miRNAs en pacientes de leucemia mieloide aguda como indicadores de la evolución clínica.. Ministerio de Economía y Competitividad. Raquel Tarazona. (Universidad de Extremadura). 01/01/2014-31/12/2016. 96.796 €.
- 5 **Project.** LABPOLE, Large Animal Biopole. FEDER; Ministerio de Economía y Competitividad. Jesús Ventanas. (Universidad de Extremadura). 17/04/2014-31/12/2015. 4.724.407 €.
- 6 **Contract.** Contrato de servicio de análisis de muestras entre la profesora de la Universidad de Extremadura, Dña. Raquel Tarazona Lafarga y Fundación PETHEMA. Tarazona. 2022-01/01/2024. 40.000 €.
- 7 **Contract.** Análisis de ligandos indicadores de la susceptibilidad a la lisis mediada por células NK en hADSC. TIGENIX (antes Cellerix). 2009-01/06/2009. 3.000€.

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

- 1 Javier García Casado; Raquel Tarazona; Olga de la Rosa. EP20120723442. Cell populations having immunoregulatory activity, method for isolation and uses PCT/EP2012/059313 18/05/2012. TIGENIX.
- 2 José Peña; Rafael Solana; Raquel Tarazona; M D Galiani; F Barahona. 200101902. Aplicaciones del péptido de secuencia NLRIALRRLAIRLN en terapia clínica. 2 222 769 Spain. 20/02/2007. Universidad de Córdoba.
- 3 Rafael Solana; José Peña; Raquel Tarazona; Maria D Galiani. 2 198 203. Nuevos métodos analíticos basados en la expresión de determinados receptores de células NK en células T CD8 2 198 203 Spain. 28/02/2005. Universidad de Córdoba.