CV Date	29/02/2024

Part A. PERSONAL INFORMATION

First Name *	Rosa María		
Family Name *	Ayala Díaz		
Sex *	Female	Date of Birth *	01/09/1968
ID number Social Security, Passport *	06564468S	Phone Number *	(34) 917792788 - 4788
URL Web			
Email Address	rayala@ucm.es		
Researcher's identification number	Open Researcher and Contributor ID (ORCID) *	0000-0002-2699-8353	
	Researcher ID		
	Scopus Author ID		

* Mandatory

A.1. Current position

Job Title	Profesor titular		
Starting date	2022		
Institution	Universidad Complutense de Madrid		
Department / Centre	MEDICINA, HEMATOLOGÍA, HOSPITAL 12 OCTUBRE / FACULTAD DE MEDICINA		
Country		Phone Number	
Keywords	320708 - Haematology		

A.3. Education

Degree/Master/PhD	University / Country	Year
Master en Calidad Asistencial	Universidad Rey Juan Carlos	2006
Programa Oficial de Doctorado en Medicina	Universidad Complutense de Madrid	2003
Especialidad en Hematología y Hemoterapia	Hospital Universitario 12 de Octubre	1997
Licenciado en Medicina y Cirugía	Universidad de Salamanca	1992

A.4. General quality indicators of scientific production

Summary of contributed publications: Total cumulative impact index 371,048. Total cumulative citations 2,591. H-index: 29. Total indexed articles: 80; 57 of them in tertiary 1 and 24 in the first decile. I am first or last author in 19 of the publications.

Communications presented at International Congresses: 106. Communications presented at National Congresses: 188.

Teaching experience: 6 PhD Theses. National Accreditation of Associate Professor by ANECA.

Full Professor Complutense University since July 2022.

Competitive public projects: Participation in 36 national research projects as PI/coordinator/ scientific (12 PI) and 1 international (European Comission). Competitive private projects: Participation in 11 research projects. Clinical trials: Participation in 50 trials (24 PI)

Awards: Awards for scientific work (UCM-Instituto ROCHE and Fundación MMA); 1 communication awards (ASH awards).

Part B. CV SUMMARY

Dr. Rosa Ayala, Graduated in Medicine from the University of Salamanca in 1992, Specialist in Hematology (1997), and Ph.D in Medicine from the Complutense University of Madrid (2003).

Master´s degree in health quality in 2006, and She is the Head of the Molecular Biology Laboratory at Hospital 12 de Octubre in Madrid, where she combines her work in the lab with patients care and with an intense research activity with more than 200 scientific publications and communications in journals and international conferences. Her clinical work is mainly carried out in the consultations of patients with myeloproliferative neoplasms. In the research task she is a director of group hematology translational I (cancer area) of research institute IMAS12 and works together with Dr. Martínez López, coordinating the translational research group and the early clinical trials unit in haematology at the 12 de Octubre Hospital. She has been an associate professor of medicine at the Universidad Complutense de Madrid (UCM) since 2008 and is Full Professor since 2022. She has directed 6 doctoral theses, and has tutored several undergraduate and postdoctoral students. Director of the Group / Line of Research of the UCM: Molecular characterization and study of hematological malignancies until 2022. Clinical Researcher of the "Unit in Hematological Tumors H12O-CNIO" from December 2014 to the present. Member of the "Ciberonc ISCIII" Research Group since January 2017.

Researcher in multiple public research projects (37 national, 13 as PI, and 1 European), private (18), as well as in more than 50 clinical trials, 25 as principal investigator. Her work has resulted in more than 80 papers in international journals and more than 10 book chapters in Spanish, as well as interventions in national and international conferences. Currently, her lines of research are in the field of resistance mechanisms in Acute Myeloid Leukemia and the study of predictors of response to treatment in this pathology with ISCIII funding (as principal investigator, PI22/01088, PI19/01518, PI16/01530 and PI13/02387). In the two last projects, we have identified the mechanisms of resistance to standard treatments in AML, as well as biomarkers of resistance, and the best therapeutic options to overcome resistance. The line of research developed in the last decade has also focused on optimizing an ultra-sensitive method of detecting residual tumor cells after chemotherapy treatment. This method of detecting minimal residual disease has application to multiple tumors but has been validated and published so far in multiple myeloma and acute leukemia. These works led to the creation of 3 patents, two approved and one pending. And based on this novel development and under patent protection a spinoff of research foundation Hospital Universitario 12 de Octubre, called ALTUMSEQUENCING, SL has been built where she is co-funder. She has also been working for years on myeloproliferative neoplasms , mainly on the molecular basis of myeloproliferative neoplasm and with the aim of finding new therapeutic targets in myelofibrosis neoplasms: "Inhibition of related JAK/STAT pathways with molecular targeted drugs shows strong synergy with ruxolitinib in chronic myeloproliferative neoplasm", which has led to the development of the clinical trial of the combination treatment in myelofibrosis based on the preclinical results obtained. In recent years, I have worked on molecular pathogenesis in familial neoplasms with several publications (D1) and on rare pathologies such as CNL and atypical CML. Member of numerous national and international scientific societies and evaluator of ISCIII health projects.

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**. Simoes, Catia; Chillon, Maria-Carmen; Martinez-Cuadron, David; et al; Paiva, Bruno; (17/31) Martinez-Lopez, Joaquin. 2023. Integrated flow cytometry and sequencing to reconstruct evolutionary patterns from dysplasia to acute myeloid leukemia.Blood advances. ELSEVIER. 7-1, pp.167-173. ISSN 2473-9537. WOS (0) https://doi.org/10.1182/bloodadvances.2022008141

2 **Scientific paper**. (1/31) Ayala, Rosa; Carreno-Tarragona, Gonzalo; Barragan, Eva; et al; Montesinos, Pau. 2022. Impact of FLT3-ITD Mutation Status and Its Ratio in a Cohort of 2901 Patients Undergoing Upfront Intensive Chemotherapy: A PETHEMA Registry Study. CANCERS. 14-23. ISSN 2072-6694. WOS (0) https://doi.org/10.3390/cancers14235799

3 **Scientific paper**. Hernandez-Boluda, Juan-Carlos; Pastor-Galan, Irene; Arellano-Rodrigo, Eduardo; et al; Pereira, Arturo; (6/30) Ayala, Rosa. 2022. Predictors of thrombosis and bleeding in 1613 myelofibrosis patients from the Spanish Registry of Myelofibrosis. BRITISH JOURNAL OF HAEMATOLOGY. Spanish MPN Grp GEMFIN. 199-4, pp.529-538. ISSN 0007-1048. WOS (0) https://doi.org/10.1111/bjh.18440

4 **Scientific paper**. Manuel Rosa-Rosa, Juan; Cuenca, Isabel; Medina, Alejandro; et al; Martinez-Lopez, Joaquin; (16/29) Ayala, Rosa. 2022. NGS-Based Molecular Karyotyping of Multiple Myeloma: Results from the GEM12 Clinical Trial. CANCERS. MDPI. 14-20, pp.5169-5169. ISSN 2072-6694. WOS (0) https://doi.org/10.3390/cancers14205169

5 **Scientific paper**. Castano-Bonilla, Tamara; Barragan, Eva; Sargas, Claudia; et al; Montesinos, Pau; (26/29) Serrano-Lopez, Juana. 2022. No Evidence that CD33 rs12459419 Polymorphism Predicts Gemtuzumab Ozogamicin Response in Consolidation Treatment of Acute Myeloid Leukemia Patients: Experience of the PETHEMA Group. DISEASE MARKERS. 2022. ISSN 0278-0240. WOS (0) https://doi.org/10.1155/2022/3132941

6 **Scientific paper**. Sanz, A; (2/19) Ayala, R; Hernandez, G; et al; Martinez-Lopez, J. 2022. Outcomes and patterns of treatment in chronic myeloid leukemia, a global perspective based on a real-world data global network. BLOOD CANCER JOURNAL. SPRINGERNATURE. 12-6. ISSN 2044-5385. https://doi.org/10.1038/s41408-022-00692-8

7 **Scientific paper**. Colmenares, Rafael; Alvarez, Noemi; Barrio, Santiago; Martinez-Lopez, Joaquin; (5/5) Ayala, Rosa (AC). 2022. The Minimal Residual Disease Using Liquid Biopsies in Hematological Malignancies.Cancers. MDPI. 14-5. ISSN 2072-6694. WOS (0) https://doi.org/10.3390/cancers14051310

8 **Scientific paper**. Martinez-Lopez, J.; Hernandez-Ibarburu, G.; Alonso, R.; et al; de la Cruz, J.; (11/18) Ayala, R.2021. Impact of COVID-19 in patients with multiple myeloma based on a global data network. BLOOD CANCER JOURNAL. SPRINGERNATURE. 11-12, pp.198. ISSN 2044-5385. WOS (0) https://doi.org/10.1038/s41408-021-00588-z

9 **Scientific paper**. Sargas, Claudia; (2/42) Ayala, Rosa; Chillon, Maria Carmen; et al; PETHEMA Grp. 2021. Networking for advanced molecular diagnosis in acute myeloid leukemia patients is possible: the PETHEMA NGS-AML project. HAEMATOLOGICA. FERRATA STORTI FOUNDATION. 106-12, pp.3079-3089. ISSN 0390-6078. WOS (0) https://doi.org/10.3324/haematol.2020.263806

10 **Scientific paper**. Simoes, Catia; Paiva, Bruno; Martinez-Cuadron, David; et al; Programa Estudio Terapeutica Hemop; (20/28) Ayala, Rosa. 2021. Measurable residual disease in elderly acute myeloid leukemia: results from the PETHEMA-FLUGAZA phase 3 clinical trial. BLOOD ADVANCES. ELSEVIER. 5-3, pp.760-770. ISSN 2473-9537. WOS (2) https://doi.org/10.1182/bloodadvances.2020003195

11 **Scientific paper**. Mellid, Sara; Coloma, Javier; Calsina, Bruna; et al; Cascon, Alberto. 2020. Novel DNMT3A Germline Variant in a Patient with Multiple Paragangliomas and Papillary Thyroid Carcinoma. CANCERS. MDPI. 12-11. ISSN 2072-6694. WOS (1) https://doi.org/10.3390/cancers12113304

12 **Scientific paper**. Gutierrez Lopez de Ocariz, Xabier; Castro Quismondo, Nerea; Vera Guerrero, Elena; Rodriguez Rodriguez, Mario; (5/6) Ayala Diaz, Rosa; Martinez Lopez, Joaquin. 2020. Thrombosis and antiphospholipid antibodies in patients with SARS-COV-2 infection (COVID-19). INTERNATIONAL JOURNAL OF LABORATORY HEMATOLOGY. WILLEY. 42-6, pp.E280-E282. ISSN 1751-5521. WOS (11) https://doi.org/10.1111/ijlh.13320

13 **Scientific paper**. Ferrer-Marin, F.; Arroyo, A. B.; Bellosillo, B.; et al; GEMFIN Grp; (14/29) Ayala, R.2020. miR-146a rs2431697 identifies myeloproliferative neoplasm patients with higher secondary myelofibrosis progression risk. LEUKEMIA. NATURE PUBLISHING GROUP. 34-10, pp.2648-2659. ISSN 0887-6924. WOS (6) https://doi.org/10.1038/s41375-020-0767-3

14 **Scientific paper**. Onecha, Esther; Ruiz-Heredia, Yanira; Martinez-Cuadron, David; et al; (19/19) Ayala, Rosa (AC). 2020. Improving the prediction of acute myeloid leukaemia outcomes by complementing mutational profiling with ex vivo chemosensitivity. BRITISH JOURNAL OF HAEMATOLOGY. WILEY. 189-4, pp.672-683. ISSN 1365-2141. WOS (3) https://doi.org/10.1111/bjh.16432

15 **Scientific paper**. Luz Morales, Maria; Arenas, Alicia; Ortiz-Ruiz, Alejandra; et al; Martinez-Lopez, Joaquin; (12/14) Ayala, Rosa. 2019. MEK inhibition enhances the response to tyrosine kinase inhibitors in acute myeloid leukemia. SCIENTIFIC REPORTS. NATURE PUBLISHING GROUP. 9, pp.18630. ISSN 2045-2322. WOS (8) https://doi.org/10.1038/s41598-019-54901-9

16 **Scientific paper**. Colom-Fernández B; Kreutzman A; Marcos-Jiménez A; et al; Muñoz-Calleja C.; (11/20) Ayala RM. 2019. Immediate Effects of Dasatinib on the Migration and Redistribution of Naïve and Memory Lymphocytes Associated With Lymphocytosis in Chronic Myeloid Leukemia Patients.FRONTIERS IN PHARMACOLOGY. FRONTIERS MEDIA SA. 10, pp.1340. ISSN 1663-9812. WOS (2) https://doi.org/10.3389/fphar.2019.01340

17 **Scientific paper**. Alba Rodríguez García; María Luz Morales; Vanesa Garrido-García; et al; María Linares; (10/13) Rosa María Ayala. 2019. Protein Carbonylation in Patients with Myelodysplastic Syndrome: An Opportunity for Deferasirox Therapy. ANTIOXIDANTS. MDPI. 8-11, pp.508. ISSN 2076-3921. WOS (3) https://doi.org/10.3390/antiox8110508

18 **Scientific paper**. González-Acosta M; Marín F; Puliafito B; et al; Pineda M; (15/35) Ayala R. 2019. High-sensitivity microsatellite instability assessment for the detection of mismatch repair defects in normal tissue of biallelic germline mismatch repair mutation carriers.JOURNAL OF MEDICAL GENETICS. BMJ PUBLISHING GROUP. 57-4, pp.269-273. ISSN 1468-6244. WOS (10) https://doi.org/10.1136/jmedgenet-2019-106272

19 **Scientific paper**. Arenas Cortés, A.; (2/12) Ayala Diaz, R.; Hernández Campo, P.; et al; Martínez López, J.2019. Ruxolitinib in combination with prednisone and nilotinib exhibit synergistic effects in human cells lines and primary cells from myeloproliferative neoplasms.HAEMATOLOGICA. FERRATA STORTI FOUNDATION. 104-5, pp.937-946. ISSN 1592-8721. WOS (1) https://doi.org/10.3324/haematol.2018.201038

20 **Scientific paper**. Onecha, Esther; Linares, Maria; Rapado, Inmaculada; et al; (22/22) Ayala, Rosa (AC). 2019. A novel deep targeted sequencing method for minimal residual disease monitoring in acute myeloid leukemia. HAEMATOLOGICA. FERRATA STORTI FOUNDATION. 104-2, pp.288-296. ISSN 0390-6078. WOS (22) https://doi.org/10.3324/haematol.2018.194712

21 **letter**. Carreno-Tarragona, Gonzalo; Varghese, Leila N.; Sebastian, Elena; et al; (11/11) Ayala, Rosa (AC). 2021. A typical acute lymphoblastic leukemia JAK2 variant, R683G, causes an aggressive form of familial thrombocytosis when germline. LEUKEMIA. SPRINGERNATURE. 35-11, pp.3295-3298. ISSN 0887-6924. WOS (0) https://doi.org/10.1038/s41375-021-01239-9

22 **Scientific paper**. 2024. Short-chain fatty acid production by gut microbiota predicts treatment response in multiple myeloma. Clin Cancer Res. 2023 Dec 18. doi: 10.1158/1078-0432.CCR-23-0195. Epub ahead of print. PMID: 38109212.

23 **Scientific paper**. 2023. Personalized monitoring of circulating tumor DNA with a specific signature of trackable mutations after chimeric antigen receptor T-cell therapy in follicular lymphoma patients. Front Immunol.2023 Jun 5. 4-1188818.

24 **Scientific paper**. 2023. Transcriptional and genomic characterization of measurable residual disease in acute myeloid leukaemia.Br. Journal. Haematology. 201(6):1239-1244..

25 **Scientific paper**. 2023. Impact of IPSS-M implementation in real-life clinical practice. Front Oncol. 13-11990.

26 **Scientific paper**. 2023. Comparison of the 2022 and 2017 European LeukemiaNet risk classifications in a real-life cohort of the PETHEMA group. Blood Cancer Journal. https://doi.org/10.1038/s41408-023-00835-5

27 **Scientific paper**. 2023. Janus kinase inhibitor ruxolitinib in combination with nilotinib and prednisone in patients with myelofibrosis (RuNiC study): A phase Ib, multicenter study.EJHaem.4(2):401-409.

28 **Scientific paper**. 2023. Real-life disease monitoring in follicular lymphoma patients using liquid biopsy ultra-deep sequencing and PET/CT. Leukemia. 37(3).

29 **Scientific paper**. 2023. Momelotinib versus danazol in symptomatic patients with anaemia and myelofibrosis (MOMENTUM): results from an international, double-blind, randomised, controlled, phase 3 study. Lancet. 401(10373):269-280.

30 **Scientific paper**. 2023. Molecular Landscape and Validation of New Genomic Classification in 2668 Adult AML Patients: Real Life Data from the PETHEMA Registry. Cancers. 15(2):438.. https://doi.org/10.3390/cancers15020438

31 **Scientific paper**. 2023. Clinical Outcomes of Patients with Multiple Myeloma after Daratumumab Failure. Life (Basel) . 2023 Aug 31;13(9):1841. doi: 10.3390/life13091841.

32 **Scientific paper**. 2023. Multidisciplinary management in chronic myeloid leukemia improves cardiovascular risk measured by SCORE. Front Pharmacol. 2023 Jul 19;14:1206893. doi: 10.3389/fphar.2023.1206893. PMID: 37538175; PMCID: PMC10394626.

33 **Scientific paper**. 2023. Posttranslational splicing modifications as a key mechanism in cytarabine resistance in acute myeloid leukemia. Leukemia. 2023 Aug;37(8):1649-1659. doi: 10.1038/s41375-023-01963-4. https://doi.org/10.1038/s41375-023-01963-4.

34 **Scientific paper**. 2023. Should we move to a genomic classification of neutrophilic myeloid neoplasms?. Blood Adv. 2023 Nov 14;7(21):6705-6706. doi: 10.1182/bloodadvances.2023011103. PMID: 37672387; PMCID: PMC10641471.

35 **Scientific paper**. 2022. Machine Learning Improves Risk Stratification in Myelofibrosis: An Analysis of the Spanish Registry of Myelofibrosis. Hemasphere. 7(1):e818.

36 **Scientific paper**. 2022. The transcriptomic landscape of elderly acute myeloid leukemia identifies B7H3 and BANP as a favorable signature in high-risk patients. Front Oncol .2:1054458.

37 **Scientific paper**. Carreno-Tarragona, Gonzalo; Alvarez-Larran, Alberto; Harrison, Claire N; et al; Cross, Nicholas Cp. 2022. Chronic neutrophilic leukemia and aCML should be considered a single entity based on molecular profiles and outcomes. Blood advances. ISSN 2473-9537. WOS (0) https://doi.org/10.1182/bloodadvances.2022008204

38 **Scientific paper**. Sanchez, Ricardo; Dorado, Sara; Ruiz-Heredia, Yanira; et al; Martinez-Lopez, Joaquin. 2022. Detection of kinase domain mutations in BCR::ABL1 leukemia by ultra-deep sequencing of genomic DNA. SCIENTIFIC REPORTS. 12-1, pp.13057-13057. ISSN 2045-2322. WOS (0) https://doi.org/10.1038/s41598-022-17271-3

39 **Scientific paper**. Alvarez-Larran, Alberto; Garrote, Marta; Ferrer-Marin, Francisca; et al; Pereira, Arturo. 2022. Real-world analysis of main clinical outcomes in patients with polycythemia vera treated with ruxolitinib or best available therapy after developing resistance/intolerance to hydroxyurea. CANCER. MPN Spanish Grp Grupo Espanol Enfermedades Mielopr. 128-13, pp.2441-2448. ISSN 0008-543X. WOS (2)

40 **Scientific paper**. Fernandez-Cruz, Ana; Puyuelo, Alba; Nunez Martin-Buitrago, Lucia; et al; Antonio Vargas, Juan; (6/10) Ayala, Rosa. 2022. Higher mortality of hospitalized haematologic patients with COVID-19 compared to non-haematologic is driven by thrombotic complications and development of ARDS: An age-matched cohorts study.Clinical infection in practice. 13, pp.100137. ISSN 2590-1702. WOS (0) https://doi.org/10.1016/j.clinpr.2022.100137

41 **Scientific paper**. Castano-Bonilla, Tamara; Alonso-Dominguez, Juan M.; Barragan, Eva; et al; Montesinos, Pau; (11/36) Ayala, Rosa. 2021. Prognostic significance of FLT3-ITD length in AML patients treated with intensive regimens. SCIENTIFIC REPORTS. NATURE PORTFOLIO. 11-1. ISSN 2045-2322. WOS (0) https://doi.org/10.1038/s41598-021-00050-x

42 **Scientific paper**. Ribera, Jordi; Granada, Isabel; Morgades, Mireia; et al; SEHH; (17/23) Ayala, Rosa. 2021. Prognostic heterogeneity of adult B-cell precursor acute lymphoblastic leukaemia patients with t(1;19)(q23;p13)/ TCF3-PBX1 treated with measurable residual disease-oriented protocols. BRITISH JOURNAL OF HAEMATOLOGY. WILEY. 196-3, pp.670-675. ISSN 1365-2141. WOS (0) https://doi.org/10.1111/bjh.17844

43 **Scientific paper**. Onecha, Esther; Rapado, Inmaculada; Morales, Maria Luz; et al; (11/11) Ayala, Rosa (AC). 2021. Monitoring of clonal evolution of acute myeloid leukemia identifies the leukemia subtype, clinical outcome and potential new drug targets for post-remission strategies or relapse. HAEMATOLOGICA. FERRATA STORTI FOUNDATION. 106-9, pp.2325-2333. ISSN 0390-6078. WOS (4) https://doi.org/10.3324/haematol.2020.254623

44 **Scientific paper**. (1/28) Ayala, Rosa (AC); Rapado, Inmaculada; Onecha, Esther; et al; PETHEMA Cooperative Study Grp. 2021. The Mutational Landscape of Acute Myeloid Leukaemia Predicts Responses and Outcomes in Elderly Patients from the PETHEMA-FLUGAZA Phase 3 Clinical Trial. CANCERS. MDPI. 13-10. ISSN 2072-6694. WOS (0) https://doi.org/10.3390/cancers13102458

45 **Scientific paper**. Sanchez-Pina, Jose Maria; Rodriguez Rodriguez, Mario; Castro Quismondo, Nerea; et al; Calbacho, Maria; (24/26) Ayala, Rosa. 2020. Clinical course and risk factors for mortality from COVID-19 in patients with haematological malignancies. EUROPEAN JOURNAL OF HAEMATOLOGY. WILEY. 105-5, pp.597-607. ISSN 0902-4441. WOS (29) https://doi.org/10.1111/ejh.13493

46 **Scientific paper**. Sanchez, Ricardo; Ribera, Jordi; Morgades, Mireia; et al; Martinez-Lopez, Joaquin; (4/17) Ayala, Rosa. 2020. A novel targeted RNA-Seq panel identifies a subset of adult patients with acute lymphoblastic leukemia with BCR-ABL1-like characteristics. BLOOD CANCER JOURNAL. SPRINGERNATURE. 10-4, pp.43-43. ISSN 2044-5385. WOS (6) https://doi.org/10.1038/s41408-020-0308-3

47 **Scientific paper**. Ibanez, Mariam; Such, Esperanza; Onecha, Esther; et al; Cervera, Jose; (9/24) Ayala, Rosa. 2020. Analysis of SNP Array Abnormalities in Patients with DE NOVO Acute Myeloid Leukemia with Normal Karyotype. SCIENTIFIC REPORTS. NATURE RESEARCH. 10-1, pp.5904. ISSN 2045-2322. WOS (2) https://doi.org/10.1038/s41598-020-61589-9

48 **Scientific paper**. I Pastor Galan; JC Hernandez-Boluda; JG Correa; A Alvarez-Larran; F Ferrer-Marín; JM Raya; (7/8) R Ayala; GEMFIN. 2020. Clinico-biological characteristics of patients with myelofibrosis: an analysis of 1,000 cases from the Spanish Registry of Myelofibrosis.Med Clin (Barc).ELSEVIER ESPANA SLU. 155-4, pp.152-158. ISSN 0025-7753. WOS (1) https://doi.org/10.1016/j.medcli.2019.11.007

49 **Scientific paper**. Sanchez Prieto, Irene; Lopez Rubio, Montserrat; Arranz, Eva; et al; Suarez, Julio Garcia; (4/13) Ayala, Rosa. 2020. Jumping Translocation in a Patient with Acute Leukemia and Fatal Evolution. CASE REPORTS IN ONCOLOGY. KARGER. 13-2, pp.1026-1030. ISSN 1662-6575. WOS (0) https://doi.org/10.1159/000508999

50 **Scientific paper**. 2020. Clinical course and risk factors for mortality from COVID-19 in patients with haematological malignancies. Eur J Haematol. 2020 Nov;105(5):597-607. doi: 10.1111/ejh.13493. Epub 2020 Aug 11. PMID: 32710500.

51 **Scientific paper**. Ricardo Sánchez; María Liz Paciello; Rosa M Ayala; Leyre Lorza; Teresa Cedena; M Pilar Martínez and Joaquín Martínez-López. 2019. Molecular Landscape and Clonal Evolution of Acute Mast Cell Leukemia: Case Study. J Genet Genome Res. 5-038. ISSN 1673-8527. https://doi.org/org/10.23937/2378-3648/1410038

52 **Scientific paper**. Alonso, Carmen M.; Llop, Marta; Sargas, Claudia; et al; Barragan, Eva; (10/21) Ayala, Rosa. 2019. Clinical Utility of a Next-Generation Sequencing Panel for Acute Myeloid Leukemia Diagnostics. JOURNAL OF MOLECULAR DIAGNOSTICS. ELSEVIER SCIENCE INC. 21-2, pp.228-240. ISSN 1943-7811. WOS (11) https://doi.org/10.1016/j.jmoldx.2018.09.009

53 **Review**. Sanchez, Ricardo; (2/3) Ayala, Rosa; Martinez-Lopez, Joaquin. 2019. Minimal Residual Disease Monitoring with Next-Generation Sequencing Methodologies in Hematological Malignancies. INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES. MDPI. 20-11, pp.2832. ISSN 1422-0067. WOS (16) https://doi.org/10.3390/ijms20112832

54 **letter**. Varghese, Leila N.; Carreno-Tarragona, Gonzalo; Levy, Gabriel; Gutierrez-Lopez de Ocariz, Xabier; Rapado, Inmaculada; Martinez-Lopez, Joaquin; (7/8) Ayala, Rosa (AC); Constantinescu, Stefan N.2021. MPL S505C enhances driver mutations at W515 in essential thrombocythemia. BLOOD CANCER JOURNAL. 11-11. ISSN 2044-5385. WOS (0) https://doi.org/10.1038/s41408-021-00583-4

55 **letter**. Alvarez, Noemi; Rodriguez-Garcia, Alba; Morales, Maria Luz; et al; (13/13) Ayala, Rosa (AC). 2021. Clonal hematopoiesis-defining mutations have no impact on the development of thrombosis in a cohort of patients with myeloid pathology.Leukemia research. PERGAMON-ELSEVIER SCIENCE LTD. 108, pp.106613. ISSN 1873-5835. WOS (0) https://doi.org/10.1016/j.leukres.2021.106613

56 **letter**. Rodriguez Rodriguez, Mario; Castro Quismondo, Nerea; Zafra Torres, Denis; Gil Alos, Daniel; (5/6) Ayala, Rosa (AC); Martinez-Lopez, Joaquin. 2021. Increased von Willebrand factor antigen and low ADAMTS13 activity are related to poor prognosis in covid-19 patients. INTERNATIONAL JOURNAL OF LABORATORY HEMATOLOGY. 43-4, pp.E152-E155. ISSN 1751-5521. WOS (8) https://doi.org/10.1111/ijlh.13476

C.3. Research projects and contracts

1 **Project**. El papel de los microorganismos en el mieloma múltiple. ALBA RODRIGUEZ GARCIA. (Hospital Universitario 12 de Octubre). 01/01/2022-31/12/2023. 72.000 €.

2 **Project**. Contratos para la intensificación de la actividad investigadora en el SNS de la convocatoria 2021 ISCIII. (Hospital Universitario 12 de Octubre). 01/01/2022-31/12/2022.

3 **Project**. Concesión de Ayudante de Investigación en la convocatoria de la Comunidad de Madrid (Consejeria de educación, juventud y deporte. Financiado Fondo Social Europeo, UE. Referencia PEJ-2017-AI/BMD-6729).. ROSA MARIA AYALA DIAZ. (Hospital Universitario 12 de Octubre). 01/04/2018-01/04/2020.

4 **Project**. PI16/01530. Alteraciones moleculares involucradas en los mecanismos de refractariedad y recaída de la leucemia mieloide aguda: Implicaciones terapéuticas.. ROSA MARIA AYALA DIAZ. (Hospital Universitario 12 de Octubre). 01/01/2017-31/12/2019. 99.220 €.

5 **Project**. Enfermedad Mínima Residual en el marco de HEALTHSTART (Proyecto de la Fundación para el Conocimiento madri+d y la Plataforma de Innovación en Tecnologías Médicas y Sanitarias). (Hospital Universitario 12 de Octubre). 01/01/2016-01/01/2017. 30.000 €.

6 **Project**. PI13/02387, PI13/ 02387.Implicaciones clínicas de la detección de mutaciones recurrentes por secuenciación masiva de paneles en leucemia mieloide aguda, y correlación con la sensibilidad a fármacos antileucemia. Instituto de Salud Carlos III. Rosa Ayala Díaz. (Hospital Universitario 12 de Octubre). 01/01/2014-31/12/2016. 62.315 €. Co-ordinator.

7 **Project**. EUROPEAN NETWORK FOR RARE AND CONGENITAL ANAEMIAS (Enerca II) Grant Agreement 2004110. European Comission. Health and Consumer Protection. Public Health and Risk Assesment.. (Hospital Universitario 12 de Octubre). 2005-2008.

8 **Project**. PROGRAMA PARA EL DESARROLLO DE TERAPIAS AVANZADAS, Y NUEVOS BIOMARCADORES y MECANISMOS DE RESISTENCIA EN HEMATOLOGIA. Martinez-Lopez IP. (FUNDACIÓN CRIS CONTRA EL CANCER). From 01/01/2024. 3.000.000 €.

9 **Project**. PI22/01088, PI22/01088 Medicina de precisión en leucemia mieloide aguda: implementación de biomarcadores de respuesta farmacológica y nuevas dianas para pacientes inelegibles para tratamiento intensivo.. Instituto de Salud Carlos III. Rosa María Ayala Díaz. (IMAS12-Hospital Universitario 12 Octubre). From 01/01/2023. 208.122 €.

10 **Project**. PMP22/00069, Plataforma diagnóstica de alto rendimiento para medicina personalizada en pacientes con leucemia aguda mieloblástica Investigado Principal: Pau Montesinos (COORDINADOR), Rosa María Ayala Díaz (IP del centro). Instituto de Salud Carlos III. (ESTUDIO MULTICENTRICO-H12O). From 01/01/2023. 3.500.000 €.

11 **Project**. PI19/01518, PI19/01518 MEDICINA DE PRECISIÓN EN LEUCEMIA MIELOIDE AGUDA: DETECCIÓN DE PACIENTES RESISTENTES A DROGAS Y DESARROLLO DE NUEVAS APROXIMACIONES TERAPÉUTICAS.. Instituto de Salud Carlos III. Rosa Ayala Díaz. (Hospital Universitario 12 de Octubre). From 01/01/2020. 183.920 €.

12 **Project**. MEDICINA DE PRECISIÓN EN LEUCEMIA MIELOIDE AGUDA: DETECCIÓN DE PACIENTES FARMACOLÓGICAMENTE RESISTENTES Y DESARROLLO DE NUEVAS OPCIONES TERAPÉUTICASSQUEDA DE NUEVAS OPCIONES TERAPÉUTICAS EN LEUCEMIA MIELOIDE AGUDA RESIS-TENTE. Sociedad Española de Hematología y Hemoterapia. Programa de Promoción de la Investigación. Financiación personal doctor: Maria Luz Morales.. Rosa María Ayala Díaz. (Centro Nacional de Investigaciones Oncológicas). From 01/2020. 72.000 €.

13 **Project**. DTS18/00187, DESARROLLO DE KITS DE CUANTIFICACIÓN DE ENFERMEDAD MÍNIMA RESIDUAL EN MM Y LMA POR SECUENCIACION MASIVA Y VALIDACIÓN. Instituto de Salud Carlos III. Joaquín Martínez López. (Hospital Universitario 12 de Octubre). From 2019. Team member.

14 **Project**. BÚSQUEDA DE NUEVAS OPCIONES TERAPÉUTICAS EN LEUCEMIA MIELOIDE AGUDA RESIS-TENTE. Sociedad Española de Hematología y Hemoterapia. Programa de Promoción de la Investigación. Financiación personal doctor: María Linares.. Rosa María Ayala Díaz. (Centro Nacional de Investigaciones Oncológicas). From 01/2018. 72.000 €.

15 **Project**. CB16/12/00369, Incorporación nuevos grupos al consorcio CIBER. Instituto de Salud Carlos III. Jesus San Miguel. (Hospital Universitario 12 de Octubre). From 2016. Team member.

16 **Project**. RD12/0036/0061, Red Temática de Investigación Cooperativa en Cáncer (RTICC). Instituto de Salud Carlos III. Joaquín Teixido. (Hospital Universitario 12 de Octubre). From 01/01/2013. 314.000 €. Team member.

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

1 EP19382730.0. Method for determining the presence or absence of minimal residual disease (MRD) in a subject who has been treated for a disease. Ampliacion a Tumor solido y linfoma. Algoritmo de correccion de errores 26/09/2019. IMAS12 y CNIO. Aplicación Internacional. PCT/EP2020/073960.

2 US20180127821A1. METHOD FOR QUANTIFYING THE LEVEL OF MINIMAL RESIDUAL DISEASE INA SUBJECT who has been treated for a disease. Ampliacion a Leucemia Mieloide Aguda. United States of America. 05/05/2016. IMAS12.

3 Santiago Barrio García; Joaquín Martínez López; Carlos Martín Sebastian; Inmaculada Rapado Martínez; Rosa Ayala Díaz. EP3018214A1. Method for quantifying the level of minimal residual disease in a subject. Aplicación Europea. EP-06895 05/11/2014. Fundación para la Investigación Biomédica del Hospital 12 de Octubre.