CV Date	07/03/2024

Part A. PERSONAL INFORMATION

First Name *	Saray		
Family Name *	Varona Álvarez		
Sex *	Not Specified	Date of Birth *	
ID number Social Security, Passport *		Phone Number *	
URL Web	www.linkedin.com/in/saray-varona-álvarez		
Email Address	svarona@santpau.cat		
Researcher's identification number	Open Researcher and Contributor ID (ORCID) *	0000-0002-7375-313X	
	Researcher ID		
	Scopus Author ID		

* Mandatory

A.1. Current position

Job Title	Postdoctoral Researcher		
Starting date	2023		
Institution	Instituto de Investigación del Hospital Santa Cruz y San Pablo		
Department / Centre			
Country		Phone Number	
Keywords	320708 - Haematology; 320713 - Oncology; 321400 - Toxicology		

A.2. Previous positions

Period	Job Title / Name of Employer / Country
2021 - 2023	Mouse Colony Manager and Associate Researcher / Josep Carreras Leukaemia Research Institute
2018 - 2021	Postdoctoral Researcher / CIBERCV
2017 - 2018	Predoctoral Researcher / CSIC
2013 - 2013	Predoctoral Researcher / Universidad Complutense de Madrid
2012 - 2013	Associate student / Instituto de Biología y Genética Molecular

A.3. Education

Degree/Master/PhD	University / Country	Year
Biomedicina	Universitat de Barcelona-2018	2018
Máster en investigación biomedica	Instituto de Biología y Genética Molecular	2012
Licenciado en Biología Opción Biología Sanitaria	Universidad Complutense de Madrid	2011

Part B. CV SUMMARY

My academic experience includes a Bachelor's degree in Biology, specialization in Health Biology, from Universidad Complutense de Madrid in 2011. I studied for a Master's degree at the Instituto de Biología y Genetica Molecular (IBGM-Universidad de Valladolid) in 2012, where I carried out my master's project called "Toll-like and sphingosine 1-phosphate Receptors on endothelial cells of cardiac valves" under the supervision Dra. Garcia. Later, I did some scientific collaborations in the same laboratory and with the same project between 2012 and 2013. Afterward, from March 2013 to June 2018, I carried out my thesis project called "Remodeling of extracellular matrix in cardiovascular pathology: dependence on LOX, Fibulin-5 and epigenetic mechanism" under the supervision of Dr. Martínez and Dra. Rodríguez. This thesis was focused on the study of genes involved in the extracellular matrix, such as lysyl oxidase and fibulin-5, genes involved in angiogenesis and inflammation, and epigenetic modifications

on the development of abdominal aorta aneurysm (AAA) and cardiac hypertrophy. Result of this thesis, I published eight papers in scientific journals of the first quartile, two of which as the first author.Continued as a postdoctoral researcher in the same laboratory, studying the participation of different pathways in the AAA and seeking drugs to attenuate the AAA; and continued studying the involvement of the Lysyl oxidase in angiogenesis. Result of these years as a postdoctoral researcher, I published five scientific papers in scientific journals, two of which as the first author.

In October 2021, I switched to another field, as an associate researcher, working on a project aiming to unravel the participation of different pathways in vascular malformations. This point was the beginning in the cancer field, and in March 2023, I joined the oncogenesis and antitumoral group at the Institut de Recerca del Hospital de Sant Pau, evaluating the antitumoral activity of nanoparticles in vivo and in vitro experiments.

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**. Puertas-Umbert, L; Varona, S; Ballester-Servera, C; et al; Rodríguez, C. 2022. Activation of Wnt/β-catenin signaling in abdominal aortic aneurysm: A potential therapeutic opportunity?. Genes & Diseases. Science Direct. pp.2352-3042.

2 **Scientific paper**. Cañes,L; Alonso, J; Ballester-Servera, C; Varona, S; R. Escudero, J; Andrés, V; Rodríguez, C; Martínez-González, J. 2021. Targeting Tyrosine Hydroxylase for Abdominal Aortic Aneurysm: Impact on Inflammation, Oxidative Stress, and Vascular Remodeling. Hypertension. American Heart Association. 78-3, pp.681-692.

3 **Scientific paper**. Varona, S; Puerta, L; Galán, M; et al; Rodríguez. C. 2021. Rolipram Prevents the Formation of Abdominal Aortic Aneurysm (AAA) in Mice: PDE4B as a Target in AAA. Antioxidants. MDPI. 10-3, pp.460.

4 **Scientific paper**. José Martínez González; Saray Varona; Laia Cañes; María Galán; Ana M Briones; Victoria Cachofeiro; Cristina Rodríguez. 2019. Emerging Roles of Lysyl Oxidases in the Cardiovascular System: New Concepts and Therapeutic Challenges. Biomolecules. 9-10, pp.610.

5 **Scientific paper**. Laura Valls Lacalle; Coral Negre Pujol; Cristina Rodríguez; Saray Varona; Antoni Valera Cañellas; José Martínez Gonzaléz; Antonio Rodríguez Sinovas. 2019. Opposite Effects of Moderate and Extreme Cx43 Deficiency in Conditional Cx43-Deficient Mice on Angiotensin II-Induced Cardiac Fibrosis. Cells. 8-10, pp.1299.

6 **Scientific paper**. Varona S; Orriols M; Galán M; et al; Rodríguez C. 2018. Lysyl oxidase (LOX) limits VSMC proliferation and neointimal thickening throught its extracelular enzymatic activity.Scientific Report. 8-1.

7 **Scientific paper**. Martínez-Revelles S; García-Redondo AB; Avendaño MS; et al; Briones AM. 2017. Lysyl oxidase induces vascular oxidative stress and contributes to arterial stiffness and abdominal elastin structure in hypertension: Role of p38MAPK.Antioxidant and Redox Signaling. 27-7, pp.379-397.

8 **Scientific paper**. Galán M; Varona S; Guadall A; et al; Rodríguez C. 2017. Lysyl oxidase overexpression accelerates cardiac remodeling and aggravates angiotensin II-induced hypertrophy.FASEB journal. 31-9, pp.3787-3799.

9 **Scientific paper**. Varona S; García-Redondo AB; Martínez-González J; Salaices M; Briones AM; Rodríguez C. 2017. Vascular lysyl oxidase over-expression alters extracelullar matrix structure and induces oxidative stress.Clinica e investigación en arteriosclerosis. 29-4, pp.157-165.

10 **Scientific paper**. Orriols M; Varona S; Aguiló S; Galán M; Martínez-González J; Rodríguez C. 2016. Inflammation inhibits vascular fibulin-5 expression: Involvement of transcription factor SOX9.Clinica e investigación en arteriosclerosis. 28-6, pp.271-280.

11 **Scientific paper**. Orriols M; Varona S; Martí-Pàmies I; et al; Martínez-González J. 2016. Down-regulation of Fibulin-5 is associated with aortic dilation: role of inflammation and epigenetics. Cardiovascular Research. 110-3431, pp.431-442.
12 **Scientific paper**. Galán M; Varona S; Orriols M; et al; Rodríguez C. 2016. Induction of histone deacetylases (HDACs) in human abdominal aortic aneurysm: therapeutic potential of HDAC inhibitors. Disease Models and Mechanisms. 1-9, pp.541-552.
13 **Scientific paper**. Miana M; Galán M; Martínez-Martínez M; et al; Cachofeiro V. 2015. The lysyl oxidase inhibitor beta-aminopropionitrile reduces body weight gain and improves the metabolic profile in diet-induced obesity in rats.Disease Models and Mechanisms. 8-6, pp.543-551.
14 **Scientific paper**. Orriols M; Guadall A; Galan M; et al; Rodriguez Sinovas, Cristina. 2014. Lysyl Oxidase (LOX) in vascular remodelling: insight from a new animal model. Thrombosis and Haemostasis. Schattauer gmbh-verlag medizin naturwissenschaften.

C.2. Conferences and meetings

1 Puertas-Umbert, L; Varona, S; Ballester-Servera, C; Alonso, J; Orriols,M; MArtínez-González, J; Rodríguez, C. Activación de la vía Wnt/beta-Catenina en el Aneurisma de aorta abdominal: Impacto de la inhibición de la porcupina y de la interaccion CBP/Beta-catenina. Congreso de la Sociedad Española de Arteriosclerosis. 2022. Spain.
2 Puertas-Umbert, L; Varona, S; Ballester-Servera, C; Alonso, J; Orriols,M; Martínez-González, J; Rodríguez, C. PDE4B como nueva diana terapeutica en el aneurisma de aorta abdominal (AAA). XXXIII Congreso Nacional SEA virtual. Sociedad Española de Arteriosclerosis. 2021. Spain.
3 ; Saray Varona; Mar Orriols; Silvia Aguiló; María Galán; José Martínez González; Cristina Sinovas. La lisil oxidasa regula la expresión vascular de MCP-1: contribución del factor de transcripción SP1.. XXXII Congreso de la Sociedad Española de Arteriosclerosis. 2019. Spain.
4 Valls-Lacalle L; Pecoraro M; Varona S; Martínez.González J; Rodríguez C; Rodríguez-Sinovas A; García-Dorado D. Human lysyl oxidase overexpression does not modify infart size in mice. 52nd Annual Scientific Meeting of the European Society for Clinical Investigation. 2018. Spain.
5 Varona S; Orriols M; Galán M; Guadall A; Cañes L; Aguiló S; Martínez-González J; Rodríguez C. La forma secretada y enzimáticamente activa de la lisil oxidasa limita el remodelado vascular.. XXXI congreso de la Sociedad Española de Arteriosclerosis. 2018. Spain.
6 Varona S; Orriols M; Galán M; Guadall A; Cañes L; Aguiló S; Martínez-González J; Rodríguez C. Secreted and enzimatically active lysyl oxidase (LOX) drives LOX-mediated inhibition of neointimal growth. 86TH Congress of the European Atherosclerosis Society. 2018. Portugal.
7 Valls-Lacalle L; Negre-Pujol C; Valera-Cañellas A; Varona S; Martínez-González J; Rodriguez C; García-Dorado D; Rodríguez-Sinovas A. Extreme connexin 43 deficiency in mice protects against collagen deposition in angiotensin II-induced myocardial hypertrophy. Scientific Sessions. American Heart Association. 2017. United States of America.
8 Varona S; Galán M; Guadall A; et al; Rodríguez C. La sobreexpresión de la lisil oxidasa agrava la hipertrofia inducida por la Angiotensina II. 22 Reunión Nacional de la SEH-LELHA. 2017. Spain.
9 Varona S; Galán M; Guadall A; et al; Rodríguez C. Lysyl oxidase over-expression aggravates angiotensin II induced hypertrophy. 85TH Congress of the European Atherosclerosis Society. 2017. Czech Republic.
10 Rodríguez C; Varona S; Martí-Pàmies I; et al; Martínez-González J. La inhibición de la Fibulina-5 promueve el desarrollo de aneurisma de aorta abdominal. XXIV Congreso Nacional de la Sociedad Española de Aterosclerosis. 2016. Spain.
11 Guadall A; Varona S; Galán M; Orriols M; Aguiló S; Martínez-González J; Rodríguez C. La inhibición del remodelado vascular por la lisil oxidasa depende de la forma secretada y catalíticamente activa.. 21 Reunión Nacional de la SEH-LELHA. 2016. Spain.

12 Orriols M; Martí-Pamíes I; Guadall A; et al; Rodríguez C. Contribución de SOX-9 y de mecanismos epigenéticos en la inhibición de la fibulina-5 por estímulos inflamatorios: implicación en el aneurisma de aorta abdomina. XXVIII Congreso Nacional de la Sociedad Española de Arteriosclerosis. 2015. Spain.
13 Orriols M; Martí-Pàmies I; Guadall A; et al; Rodríguez C. Fibulin- 5 is downregulated in abdominal aortic aneurysm: Involvement of epigenetic mechanism. 83RD Congress of the European Atherosclerosis Society. 2015. United Kingdom.
14 Rodríguez C; Galán M; Varona S; Orriols M; Aguiló S; De Diego A; Osada J; Martínez-González J. Lysyl oxidase overexpression impacts cardiovascular remodelling. Congress of the European Society of Cardiology. 2015. United Kingdom.
15 María Galán; Anna Guadall; Mar Orriols; et al; Cristina Rodríguez. TRANSGENIC MICE OVER-EXPRESSING LYSYL OXIDASE EXHIBIT REDUCED NEOINTIMAL THICKENING AFTER CAROTID LIGATION. Frontiers in Cardiovascular Biology 2014. 2014. Spain.
16 Mar Orriols; Anna Guadall; María Galán; et al; Cristina Rodríguez. LYSYL OXIDASE (LOX) IN VASCULAR REMODELLING: INSIGHT FROM A NEW ANIMAL MODEL. 82nd European Atherosclerosis Society Congress (EAS 2014). 2014. Spain.
17 María Miana; Maria Galán; Ernesto Martínez Martínez; Saray Varona; Raquel Jurado López; Jose Martínez-González; Cristina Rodríguez; Victoria Cachofeiro. LA INHIBICIÓN DE LA LISIL OXIDASA MEJORA LAS ALTERACIONES METABóLICAS Y DEL TEJIDO ADIPOSO EN ANIMALES OBESOS. XXVII Congreso Nacional Sociedad Española de Arteriosclerosis. 2014. Spain.
18 S.Varona; I.Fernandez-Pisonero; J.Lopez; et al; C. Garcia-Rodriguez. SPHINGOSINE-1 PHOSPHATE AND TOLL-LIKE RECEPTOR 4-COOPERATE TO INDUCE INFLAMMATORY AND ADHESIVE RESPONSES IN HUMAN AORTIC VALVE ENDOTHELIAL CELLS. The heart interacting with the systemic organs. 2013. Holland.
19 Isabel Fernandez Pisonero; Javier Lopez; Ana Dueñas; et al; Carmen García-Rodríguez. SPHINGOSINE 1-PHOSPHATE INDUCES INFLAMMATION AND OSTEOGENESIS AND INCREASES THE ACTIVITY OF THE LSP/TLR4 ROUTE IN HUMAN AORTIC VALVE INTERSTITIAL CELLS. Congress IUBMB-FEBS Sevilla 2012. 2012. Spain.

C.3. Research projects and contracts

1 **Project**. CPP2021-008946, New protein-based nanodrugs for the development of targeted tumor-agnostic therapy. Ministerio de Ciencia e Innovación. Esther Vazquez. (Nanoligent - Instituto de Investigación del Hospital Santa Cruz y San Pablo). 01/12/2022-19/02/2025. 439.367,01 €. Team member.
2 **Project**. Grupos de Investigación Consolidados Reconocidos: “Grupo de Investigación en Biología vascular i Coagulopatías” (Ref. 2017SGR-333). Agència de Gestió d’Ajuts Universitaris i de Recerca (AGAUR). José Martínez González. (Instituto de investigaciones Biomedicas de Barcelona). 2019-2020. 20.000 €.
3 **Project**. The nuclear receptor NOR-1 in cardiac and vascular remodeling: analysis of pathophysiological mechanism and validation of new animal models useful for preclinical testing.. Ministerio de Economia y competitividad. José Martínez González. (Instituto de Investigaciones Biomedicas de Barcelona). 2016-2018.
4 **Project**. Remodelado de la matriz extracelular en la angio-arteriogenesis y la función vascular: impacto sobre la fisiologia y el manejo clínico de la enfermedad arterial periférica.. Sociedad Española de Cardiología. Rodriguez C. (Institut Català de Ciències Cardiovasculars). 2017-2017.
5 **Project**. Red de Investigación Cardiovascular (RIC) Grupo referencia RD12/0042/0053.. Instituto de Salud Carlos III. José Martínez González. (Instituto de Investigaciones Biomedicas de Barcelona). 01/2013-12/2016.
6 **Project**. Contribución de la lisil oxidasa (LOX) al estrés oxidativo, la rigidez vascular y la hipertension arterial.. Rodriguez C. (Institut Català de Ciències Cardiovasculars). 2016-2016.

7 **Project**. Estrategias traslacionales basadas en la fosfodiesterasa PDE4B como nueva diana terapéutica en la enfermedad arterial periférica y el aneurisma de aorta abdominal. Cristina Rodríguez. (INSTITUT DE RECERCA DE L'HOSPITAL DE LA SANTA CREU I SANT PAU). From 10/2020. 12.000 €.

8 **Project**. La fosfodiesterasa PDE4B en la enfermedad arterial periférica y el aneurisma de aorta abdominal: impacto sobre la fisiologia y el manejo clinico. Cristina Rodríguez. (Instituto de Investigación del Hospital Santa Cruz y San Pablo). From 01/09/2020.

9 **Project**. Role of NR4A nuclear receptors and elastogenic proteins (Lysyl Oxidase and fibulin-5) in arterial disease and ischemia.. Instituto de Salud Carlos III. José Martínez González. (Instituto de Investigaciones Biomedicas de Barcelona). From 2018.

10 **Project**. CIBER de Enfermedades Cardiovasculares (Ref. grupo CB16/11/00257). Instituto de Salud Carlos III. José Martínez González. (Instituto de Investigaciones Biomedicas de Barcelona). From 2017.

C.5. Stays in public or private R&D centres

1 Instituto de Biología y Genética Molecular. Spain. valladolid. 27/10/2017-27/10/2017. Doctorate.

2 Universidad Complutense de Madrid. Faculty of medicine. Spain. Madrid. 09/2010-06/2011. Internship student.

3 Instituto de Biología y Genética Molecular. IBGM-CSIC. Spain. Valladolid. 01/07/2010-31/08/2010. 2 months. Practicas de empresa.

4 Universidad Complutense de Madrid. Facultad de Medicina. Spain. Madrid. 01/10/2010-31/05/2010. 8 months. Alumna Interna.