

CURRICULUM VITAE

Part A. PERSONAL INFORMATION

CV date 08/09/2026

Part A: PERSONAL INFORMATION

First name	AIDA		
Family name	COLLADO SÁNCHEZ		
Gender	FEMALE		
ID number	47095258K		
e-mail	aida.collado.sanchez@ki.se	URL Web: https://ki.se/en/people/aida-collado-sanchez	
Open Researcher and Contributor ID (ORCID)	0000-0002-3183-2104		

A.1. Current position

Position	Assistant Professor		
Initial date	30/09/2024		
Institution	Karolinska Institutet		
Department/Center	Department of Medicine, Solna	Division of Cardiology, BioClinicum	
Country	Sweden	Teleph. number	+34 617900125
Key words	Diabetes, endothelial dysfunction, extracellular vesicles, red blood cells, vascular complications, non-coding RNAs		

A.2. Previous positions (research activity interruptions, see call)

Period	Position/Institution/Country		
2020-2024	Postdoctoral Researcher, Karolinska Institutet, Sweden		
2020	Postdoctoral Researcher, Hospital La Fe Research Institute, Spain		
2014-2019	PhD Fellow, Department of Pharmacology, University of Valencia, Spain		
2017 (Jul–Sep)	Predoctoral research stay, King's College London, School of Cardiovascular Medicine & Sciences, United Kingdom		

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Biomedicine and Pharmacy. International mention. <i>Sobresaliente Cum Laude</i>	University of Valencia, Spain.	2019
MSc in Research and Rational Use of Medicines	University of Valencia, Spain. Extraordinary Master's Award.	2014
Licensed in Biotechnology	Polytechnic University of Valencia, Spain	2013

Part B. CV SUMMARY

Original articles: 33 (26 in Q1, including 15 in D1); first-author/corresponding-author papers: 13; h-index: 19; total citations: 890 (WOS, updated 03/06/2026); award-winning communications: 10.

Dr. Collado is an Assistant Professor at Karolinska Institutet, where she leads an emerging research line on erythrocytes, erythrocyte-derived extracellular vesicles, and non-coding RNAs as mediators of endothelial dysfunction and vascular complications in type 2 diabetes. Her research trajectory began during her predoctoral stage at the University of Valencia, where she investigated vascular inflammation, primary hypercholesterolemia, metabolic disorders, and abdominal aortic aneurysm, and included a predoctoral research stay at King's College London focused on leukocyte-endothelial interactions. This early work provided the conceptual and methodological basis for her later transition towards red blood cell biology and diabetic vascular disease.

During her postdoctoral period, first at Hospital La Fe Research Institute and subsequently at Karolinska Institutet, she progressively shifted from vascular inflammation towards erythrocyte-mediated endothelial dysfunction, cardioprotection, and extracellular vesicle biology. Her work has helped establish red blood cells as active regulators of vascular injury and cardioprotection rather than passive oxygen carriers, and has identified arginase-1 signaling, oxidative stress, and miR-210-related pathways as contributors to diabetes-associated endothelial dysfunction. These findings have opened new avenues for biomarker discovery and mechanism-based therapeutic targeting and have been published in leading international journals, including *The Journal of Clinical Investigation*, *Diabetes*, *British Journal of Pharmacology*, *JACC: Basic to Translational Science*, and *Cardiovascular Research*.

Her increasing scientific independence is reflected in competitive funding obtained as principal investigator from Swedish and international agencies and foundations, including the Swedish Heart and Lung Foundation, the Åke Wiberg Foundation, the Foundation for Geriatric Diseases, Karolinska Institutet foundations, Tore Nilson's Foundation, and the European Foundation for the Study of Diabetes (EFSD), together with co-principal-investigator roles in grants funded by the Swedish Research Council. These resources support a distinct and forward-looking research program focused on erythrocyte-derived extracellular vesicles, non-coding RNAs, and therapeutic targeting in diabetic vascular complications.

Beyond publications and funding, Dr. Collado contributes to the international visibility and societal relevance of her work through oral communications and moderated posters at major meetings such as ESC, EASD, FCVB, and other international congresses, as well as peer review for international journals, teaching in bachelor's, master's, and doctoral programs, and coordination of doctoral training. She also demonstrates scientific leadership through formal supervision and structured research training of early-career researchers. She currently acts as formal PhD co-supervisor at Karolinska Institutet for **Eftychia Kontidou** (ongoing, 2022–2026), **Rawan Humoud** (ongoing, 2024–2028), and **Georgios Filis** (ongoing, 2025–2029). These doctoral projects are directly embedded in her current research program and have already produced first-author publications associated with supervised research trajectories. She has also supervised 7 master's students at Karolinska Institutet, serves as head of a doctoral course, and is co-inventor of an international patent on prenylated benzopyranes as PPAR agonists.

She has also contributed to the social visibility of science and women in STEM through initiatives such as her selection as a female STEM reference in the [2026 AIETI Calendar](#) and her inclusion in the 2021 exhibition "[March 8, 8 relevant women of Albacete](#)". Her research has been recognized through competitive distinctions, including the García-Blanco Medal (2021), the Paul Dudley White International Scholar Award (2024), the Alvarenga Award (2024), the Young Investigator Award of the Spanish Society of Pharmacology (2025), and the EFSD and Lilly Young Investigator Research Award (2026).

Overall, her research combines mechanistic, translational, and clinically oriented approaches with the aim of improving the prevention and treatment of vascular complications in diabetes and related cardiometabolic disorders.

Part C. RELEVANT MERITS

C.1. Publications

1. Kontidou E, **Collado A**, Humoud R, ..., Pernow J, Zhou Z (CA). 2026. Long Duration of Type 2 Diabetes Drives Erythrocyte-Induced Vascular Endothelial Dysfunction: A Link to miRNA-210-3p. *Diabetes*. 75(3):563-570. DOI: [10.2337/db25-0463](#). **IF: 7.6; D1**. Applicant position: 2/12.
2. **Collado A** (CA), Humoud R, Kontidou E, ..., Zhou Z, Pernow J. 2025. Erythrocyte-derived extracellular vesicles induce endothelial dysfunction through arginase-1 and oxidative stress in type 2 diabetes. *J Clin Invest*. 135(10): e180900. DOI: [10.1172/JCI180900](#). **IF: 13.6; D1**. Applicant position: 1/19.
3. **Collado A**, Jiao T, Kontidou E, ..., Pernow J, Zhou Z (CA). 2025. miR-210 as a therapeutic target in diabetes-associated endothelial dysfunction. *Br J Pharmacol*. 182(2):417-431. DOI: [10.1111/bph.17329](#). **IF: 7.7; D1**. Applicant position: 1/18.
4. Yang J, Sundqvist ML, Zheng X, ..., **Collado A**, ..., Pernow J (CA). 2023. Hypoxic erythrocytes mediate cardioprotection through activation of soluble guanylate cyclase and release of cyclic GMP. *J Clin Invest*. 133(17): e167693. DOI: [10.1172/JCI167693](#). **IF: 13.3; D1**. Applicant position: 5/17.
5. Jiao T (CA), **Collado A**, Mahdi A, ..., Pernow J. 2023. Stimulation of Erythrocyte Soluble Guanylyl Cyclase Induces cGMP Export and Cardioprotection in Type 2 Diabetes. *JACC Basic Transl Sci*. 8(8):907-918. DOI: [10.1016/j.jacbts.2023.02.017](#). **IF: 8.4; D1**. Applicant position: 2/11.
6. Zhou Z (CA), **Collado A**, Sun C, ..., Pernow J. 2021. Downregulation of Erythrocyte miR-210 Induces Endothelial Dysfunction in Type 2 Diabetes. *Diabetes*. 71(2):285-297. DOI: [10.2337/db21-0093](#). **IF: 9.305; D1**. Applicant position: 2/18.
7. **Collado A**, Domingo E, Marques P, ..., Sanz MJ (CA). 2021. Oral Unsaturated Fat Load Impairs Postprandial Systemic Inflammation in Primary Hypercholesterolemia Patients. *Front. Pharmacol*. 12: 656244. DOI: [10.3389/fphar.2021.656244](#). **IF: 5.988; Q1**. Applicant position: 1/9.
8. Ortega R*, **Collado A*** (shared co-first author), Selles F, ..., Piqueras L (CA). 2019. SGLT-2 (Sodium-Glucose Cotransporter 2) Inhibition Reduces Ang II (Angiotensin II)-Induced Dissecting Abdominal Aortic Aneurysm in ApoE (Apolipoprotein E) Knockout Mice. *Arterioscler Thromb Vasc Biol*. 39(8): 1614-1628. DOI: [10.1161/ATVBAHA.119.312659](#). **IF: 6.604; D1**. Applicant position: 1/7.

9. **Collado A**, Marques P, Domingo E, ..., Sanz MJ (CA). 2018. Novel Immune Features of the Systemic Inflammation Associated with Primary Hypercholesterolemia: Changes in Cytokine/Chemokine Profile, Increased Platelet and Leukocyte Activation. *J Clin Med*. 8(1): 1-18. DOI: [10.3390/jcm8010018](https://doi.org/10.3390/jcm8010018). **IF: 5.688; D1**. Applicant position: 1/10.
10. **Collado A**, Marques P, Escudero P, ..., Sanz MJ (CA). 2018. Functional role of endothelial CXCL16/CXCR6-platelet-leucocyte axis in angiotensin II-associated metabolic disorders. *Cardiovasc Res*. 114(13): 1764-1775. DOI: [10.1093/cvr/cvy135](https://doi.org/10.1093/cvr/cvy135). **IF: 7.014; D1**. Applicant position: 1/10.

C.2. Congress

>50 communications at national and international congresses, of which 10 representative contributions are highlighted below:

1. **Collado A**, Kontidou E, Santana-Garrido Á, Yang J, Mahdi A, Humoud R, Manickam K, Jiao T, Alvarsson M, Pernow P, Zhou Z. *Myeloperoxidase delivered by erythrocyte-derived extracellular vesicles promotes oxidative stress and endothelial dysfunction in type 2 diabetes*. **Oral communication**. 2nd EASD Early Career Academy Meeting. Düsseldorf (Germany), 30 Mar–01 Apr 2026.
2. **Collado A**, Humoud R, Kontidou E, Swaich J, Yang J, Mahdi A, Tengbom J, Zhou Z, Pernow J. *Increased endothelial cell uptake of erythrocyte-derived extracellular vesicles carrying arginase-1 induces endothelial dysfunction in type 2 diabetes*. **Moderated poster**. ESC Congress 2024. London (UK), 29 Aug–02 Sep 2024. *European Heart Journal*, Volume 45, Issue Supplement_1, October 2024, ehae666.3685. DOI: [10.1093/eurheartj/ehae666.3685](https://doi.org/10.1093/eurheartj/ehae666.3685).
3. **Collado A**, Humoud R, Kontidou E, Eldh M, Swaich J, Yang J, Jiao T, Domingo E, Mahdi A, Tengbom J, Alvarsson M, Gabrielsson S, Eriksson P, Zhou Z, Pernow J. *Erythrocyte-derived extracellular vesicles induce endothelial dysfunction through arginase-1 and oxidative stress in type 2 diabetes*. **Oral communication**. 13th International Meeting on the Biology, Chemistry, and Therapeutic Applications of Nitric Oxide. Stockholm (Sweden), 21–23 Aug 2024.
4. **Collado A**, Humoud R, Kontidou E, Yang J, Jiao T, Mahdi A, Zhou Z, Pernow J. *Erythrocyte-derived extracellular vesicles from patients with type 2 diabetes induce endothelial dysfunction through increased vascular oxidative stress*. **Poster**. Vascular Discovery: From Genes to Medicine 2024 Scientific Sessions. Chicago (USA), 15–18 May 2024. *Arteriosclerosis, Thrombosis, and Vascular Biology*. Volume 44, Number Suppl_1. DOI: [10.1161/atvb.44.suppl_1.1127](https://doi.org/10.1161/atvb.44.suppl_1.1127).
5. **Collado A**, Humoud R, Kontidou E, Eldh M, Yang J, Jiao T, Domingo E, Mahdi A, Gabrielsson S, Eriksson P, Zhou Z, Pernow J. *Red blood cell-derived extracellular vesicles from type 2 diabetes patients induce endothelial dysfunction through a mechanism involving arginase 1*. **Oral communication**. Frontiers in CardioVascular Biomedicine (FCVB) 2024. Amsterdam (Netherlands), 12–14 Apr 2024.
6. **Collado A**, Humoud R, Eldh M, Jiao T, Domingo E, Kontidou E, Yang J, Mahdi A, Gabrielsson S, Eriksson P, Zhou Z, Pernow J. *Erythrocyte-derived extracellular vesicles from type 2 diabetes patients induce endothelial dysfunction through arginase 1*. **Moderated poster**. ESC Congress 2023. Amsterdam (Netherlands), 25–28 Aug 2023. *European Heart Journal*, Volume 44, Issue Supplement_2, November 2023, ehad655.3066. DOI: [10.1093/eurheartj/ehad655.3066](https://doi.org/10.1093/eurheartj/ehad655.3066).
7. **Collado A**, Jiao T, Zaccagnini G, Yang J, Carlström M, Martelli F, Pernow J, Zhou Z. *Overexpression of miR-210 attenuates endothelial dysfunction in a mouse model of obesity and type 2 diabetes*. **Oral communication**. 58th Annual Meeting of the European Association for the Study of Diabetes (EASD). Stockholm (Sweden), 19–23 Sep 2022.
8. **Collado A**, Jiao T, Zaccagnini G, Yang J, Carlström M, Martelli F, Pernow J, Zhou Z. *Overexpression of miR-210 ameliorates endothelial dysfunction in type 2 diabetic mice*. **Moderated poster**. ESC Congress 2022. Barcelona (Spain), 26–29 Aug 2022. *European Heart Journal*, Volume 43(Supplement_2). DOI: [10.1093/eurheartj/ehac544.3074](https://doi.org/10.1093/eurheartj/ehac544.3074).
9. **Collado A**, Domingo E, Perez-Alos L, Marques P, Perello E, Real JT, Piqueras L, Ascaso JF, Sanz MJ. *ApoE-/- mice without CCR3 receptor present hastened atherosclerosis*. **Oral communication**. 1st Meeting in Translational Pharmacology/38th Spanish Society of Pharmacology Meeting. Santiago de Compostela (Spain), 19–22 Jun 2018. **Best Oral Communication Award**.
10. **Collado A**, Escudero P, Rius C, Marques P, Piqueras L, Sanz MJ. *CXCR6/CXCL16 axis is involved in abdominal aortic aneurysm formation induced by angiotensin II*. **Oral communication**. 36th Congress of the Spanish Society of Pharmacology. Valencia (Spain), 2015. **Best Oral Communication Award**.

C.3. Research projects

She has secured 9 projects as sole PI, amounting to approx. 3,000,000 SEK, and has also participated as co-PI or team member in 4 additional projects with total funding of approx. 13,625,000 SEK. The most relevant ones are listed below:

1. **EFSD003-ELYI26-1717**. EFSD and Lilly Young Investigator Research Awards “*Targeting red blood cell-derived extracellular vesicles uptake to prevent diabetic vascular injury*”. Funding entity: European Foundation for the Study of Diabetes. PI: Aida Collado Sánchez, Karolinska Institutet. Start: 01/06/2026. End: 30/06/2027. Amount: 50,000 €. Role: Sole PI. Competitive peer-reviewed funding. **Personal contribution: project conception, hypothesis generation, and overall scientific leadership.**
2. **M25-0045**. “*Red Blood Cell-Derived Extracellular Vesicles as Novel Contributors to Vascular Injury in Type 2 Diabetes*”. Funding entity: Åke Wiberg Foundation. PI: Aida Collado Sánchez, Karolinska Institutet. Start: 01/01/2026. End: 31/12/2027. Amount: 500,000 SEK (47,000 €). Role: Sole PI. Competitive peer-reviewed funding. **Personal contribution: independent project design and leadership.**
3. **2025-0728**. “*Erythrocyte-Derived Extracellular Vesicles as Mediators of Vascular Complications in Type 2 Diabetes*”. Funding entity: Swedish Heart and Lung Foundation. PI: Aida Collado Sánchez, Karolinska Institutet. Start: 01/01/2026. End: 31/12/2027. Amount: 1,140,000 SEK (104,000 €). Role: Sole PI. Competitive peer-reviewed funding. **Personal contribution: developed the central hypothesis and led the implementation of the research plan.**
4. **2025-01921**. “*Erythrocyte-derived extracellular vesicles as mediators of vascular complications in type 2 diabetes*”. Funding entity: Foundation for Geriatric Diseases. PI: Aida Collado Sánchez, Karolinska Institutet. Start: 01/01/2025. End: 31/12/2026. Amount: 150,000 SEK (13,700 €). Role: Sole PI. Competitive peer-reviewed funding. **Personal contribution: project conception and execution.**
5. **2024-02459**. “*Red blood cell-derived extracellular vesicles as novel mediators of vascular endothelial injury in type 2 diabetes*”. Funding entity: Karolinska Institutet Foundation. PI: Aida Collado Sánchez, Karolinska Institutet. Start: 01/01/2025. End: 31/12/2026. Amount: 230,000 SEK (21,150 €). Role: Sole PI. Competitive peer-reviewed funding. **Personal contribution: leads project strategy and experimental design.**
6. **2024-227**. “*The importance of red blood cell-derived extracellular vesicles for vascular injury in type 2 diabetes: molecular signaling and therapeutic implications*”. Funding entity: Tore Nilson’s Foundation. PI: Aida Collado Sánchez, Karolinska Institutet. Start: 01/01/2025. End: 31/12/2026. Amount: 100,000 SEK (9,500 €). Role: Sole PI. Competitive peer-reviewed funding. **Personal contribution: leads project strategy and experimental design.**
7. **2024-02534**. “*The importance of erythrocytes as a mediator and treatment goals in cardiovascular disease*”. Funding entity: Swedish Research Council. PIs: Aida Collado Sánchez, John Pernow, Sergiu-Catrina, and Jiangning Yang, Karolinska Institutet. Start: 01/12/2024. End: 31/12/2029. Amount: 6,100,000 SEK (560,000 €). Role: Co-PI. Competitive peer-reviewed funding. **Personal contribution: independent research line on erythrocyte-mediated vascular injury within a larger collaborative framework.**
8. **2023-02508**. “*Erythrocyte-derived non-coding RNAs: new mediators of vascular injury in diabetes*”. Funding Entity: Swedish Research Council. PIs: Aida Collado Sánchez, Zhichao Zhou, and Sergiu-Catrina, Karolinska Institutet. Start: 01/12/2023. End: 31/12/2026. Amount: 2,900,000 SEK (270,000 €). Role: Co-PI. Competitive peer-reviewed funding. **Personal contribution: co-developed the project and led the work package focused on non-coding RNA and vascular dysfunction.**
9. **2023-01860**. “*Unraveling the role of red blood cells-derived extracellular vesicles in the development of atherosclerosis in type two diabetes*”. Funding entity: Foundation for Geriatric Diseases. PI: Aida Collado Sánchez, Karolinska Institutet. Start: 01/01/2023. End: 31/12/2025. Amount: 225,000 SEK (21,000 €). Role: Sole PI. Competitive peer-reviewed funding. **Personal contribution: project design and leadership.**
10. **Novo Nordisk-Karolinska postdoctoral fellowship program**. “*The red blood cell as a novel mediator of vascular endothelial injury in type 2 diabetes*”. Funding Entities: Novo Nordisk and Karolinska Institutet. PIs: John Pernow, Per Eriksson, and Zhichao Zhou, Karolinska Institutet. Start: 02/11/2020. End: 31/05/2024. Amount: 3,225,000 SEK (300,000 €). Role: Postdoctoral researcher/member of the project team. **Personal contribution: developed and executed the research line that later evolved into my current independent program on erythrocyte-derived extracellular vesicles and vascular dysfunction in diabetes.**

C.4. Contracts, technological or transfer merits

1. Cortes D, Sanz MJ, Cabedo N, Bermejo A, Piqueras L, **Collado A**, Gomes P, Vila L. *Prenylated Benzopyranes as PPAR agonists*. Application number: 18897200.4-1110. International application no.: PCT/ES2018/070826. Priority country: Spain. Priority date: 26/12/2017. International application submission date: 21/12/2018. Publication date: 31/07/2020. Patent no.: ES2718000. Entity: University of Valencia and INCLIVA. Extension: all designated countries.