



CURRICULUM VITAE (CVA)

Part A. PERSONAL INFORMATION			CV date	9/12/2025
First name	María Jesús			
Family name	Lobo-Castañón			
Gender (*)	Female	Birth date (dd/mm/yyyy)	-	
Social Security, Passport, ID number	-			
e-mail	mjlc@uniovi.es	URL Web:	https://www.unioviedo.es/electroanalysis	
Open Research and Contributor ID (ORCID)(*)	0000-0002-2964-9490			

(*) *Mandatory*

A.1. Current position

Position	Full Professor (Catedrática de Universidad)		
Initial date	03/01/2017		
Institution	University of Oviedo		
Department/Center	Physical and Analytical Chemistry /Faculty of Chemistry		
Country	Spain	Teleph. number	-
Key words	Aptamers; Biosensors; Liquid biopsy; Bioreceptors; Electroanalysis, Biomarkers		

A.2. Previous positions (research activity interruptions, art. 45.2.b))

Period	Position/Institution/Country/Interruption cause
2001 – 2017	Associate Prof. (Profesora Titular de Universidad)/ University of Oviedo
1996-2001	Assistant Prof. (Profesora Asociada) /University of Oviedo

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD	University of Oviedo	1996
Graduate Chemistry	University of Oviedo	1991

A.4. General indicators of quality of scientific production.

Six-year research periods with positive evaluation: 5 (the last one for the period 2016-2021);
Five-year teaching periods recognized: 6 (The last one for the period 2018-2022);
Supervised Thesis: 12; Total Cites: 5125 (WOS); 5470 (SCOPUS); 6725 (Google Academic);
In the last five years (2020-2024) my work has received an average of 326 citations/year..
Number of publications in Q1: 94; H-index: 38 (WOS); 40 (SCOPUS); 45 (Google Scholar, i10: 110).

Parte B. CV SUMMARY

María Jesús Lobo-Castañón holds a PhD in Chemistry, with extraordinary award and leads GEUO (the Electroanalysis research group at the University of Oviedo) in Spain. Since 2017 she is Full Professor in Analytical Chemistry in the Department of Physical and Analytical Chemistry of the University of Oviedo, position from which she combines teaching tasks in different courses of the Degree in Chemistry and Master in Analytical and Bioanalytical Sciences, with research and innovation activities. She has 6 five-years teaching periods and 5 six-years research periods (2016-2021) recognized.

Her research interests focus on the development of electrochemical sensors (amperometric, voltametric and based on impedance spectroscopy) that use as recognition element natural receptors such as enzymes and nucleic acids, as well as others receptors that mimic natural ones, such as aptamers and molecularly imprinted polymers and their application to solve real analytical problems, mainly in clinical analysis and food safety control. She also has experience in the use of surface plasmon resonance spectroscopy for the characterization of affinity interactions and the design of sensors.

After her doctoral training under the direction of Prof. Paulino Tuñón Blanco and Arturo J Miranda Ordieres, she has carried out two post-doctoral stays in highly prestigious research centers: Department of Pure and Applied Biochemistry of the University of Lund, Sweden in the research group coordinated by Prof. K. Mosbach, a pioneer in the design and synthesis of molecularly imprinted polymers and the Nanobioelectronics Laboratory of the Nanoengineering Department of the University of California San Diego, led by Professor J.Wang, one of the most internationally recognized scientists in Electrochemistry.

She has published 127 papers in research journals indexed in JCR, both in journals in the area of multidisciplinary Chemistry: J. Am. Chem. Soc., Angew. Chem. Int. Ed., Chemical Science, as well as in the most prestigious in the area of Analytical Chemistry and Sensors: Biosens. Bioelectron., ACS Sensors, Anal. Chem., Sens Actuators B, Anal. Chim. Acta, Talanta. More than 70% of her publications are in journals in the first quartile (Q1). She has received more than 5000 citations, with an average of 37 citations/article and an h-index of 39-42 (Scopus-Google Scholar). She is the author of a patent and 11 book chapters. In addition, she has directed 11 Doctoral Theses. In the last five years, she has given 7 invited lectures and keynotes at international conferences.

She has been coordinator of 6 research projects obtained in competitive calls financed by the Government of Spain, the European Commission and the government of the Principality of Asturias. She maintains collaborations with research groups with recognized prestige in the field of Sensor development. She is a member of the International Society of Electrochemistry (ISE), the Royal Spanish Society of Chemistry, the Spanish Society of Analytical Chemistry and the American Chemical Society (ACS). She is associate editor of Talanta and a member of the scientific committee of the journals Sens Actuators B and Anal. Bioanal. Chem. She is reviewer in specialized scientific journals in Multidisciplinary Chemistry, Electrochemistry and Analytical Chemistry such as Angew. Chem. (in 2021 in the top 10% of its reviewers), Chem. Sci., Nature Commun., Biosens. Bioelectron., Anal. Chim. Acta etc.

Part C. RELEVANT MERITS (*sorted by typology*)

C.1. Most important publications in books and journals with "peer review" and in conferences

1. Artículo científico. Ines Díaz Martínez; Rebeca Miranda Castro; Noemí de los Santos Álvarez; Maria Jesus Lobo Castañón. 2024. A lectin-mimicking aptamer as a generic glycan receptor for sensitive detection of glycoproteins associated to cancer. Analytical Chemistry. ACS. 96, pp.2759-2763. ISSN 0003-2700. <https://doi.org/10.1021/acs.analchem.3c05891>.

2. Artículo científico. Ioana Manea; Magdolna Casian; Oana Hosu-Stancioiu; Noemí de los Santos Álvarez; Maria Jesus Lobo Castañón; Cecilia Cristea. 2024. A review on magnetic beads-based SELEX technologies: Applications from small to large target molecules. Analytica Chimica Acta. Elsevier. 1297, pp.342325. ISSN 0003-2670. <https://doi.org/10.1016/j.aca.2024.342325>

3. Artículo científico. Ana Díaz Fernández; Noemi de los Santos Álvarez; Maria Jesus Lobo Castañón. 2024. Capacitive spectroscopy as transduction mechanism for wearable biosensors: opportunities and challenges. Analytical and Bioanalytical Chemistry. Springer. 416, pp.2089. ISSN 1618-2642. <https://doi.org/10.1007/s00216-023-05066-y>

4. Artículo científico. Raquel Sánchez Salcedo; Rebeca Miranda Castro; Noemí de los Santos Álvarez; Daniel Fernández Martínez; Luis Joaquin García Flórez; Universidad de Oviedo. 2023. An electrochemical genosensing platform for the relative quantification of the circulating long noncoding RNA CCAT1 to aid in the diagnosis of colorectal cancer. Sensors

and Actuators B: Chemical. Elsevier. 376, pp.132940. ISSN 0925-4005. <https://doi.org/10.1016/j.snb.2022.132940>

5. Artículo científico. Miguel Aller Pellitero; Noemí de los Santos Álvarez; Maria Jesus Lobo Castañón. 2023. Aptamer-based electrochemical approaches to meet some of the challenges in the fight against cancer. *Current Opinion in Electrochemistry*. Elsevier. 39, pp.101286. ISSN 2451-9111. <https://doi.org/10.1016/j.coelec.2023.101286>

6. Artículo científico. Raquel Sánchez Salcedo; Rebeca Miranda Castro; Noemí de los Santos Álvarez; Maria Jesus Lobo Castañón; Damion Corrigan. 2023. Comparing nanobody and aptamer-based capacitive sensing for detection of Interleukin-6 (IL-6) at physiologically relevant levels. *Analytical and Bioanalytical Chemistry*. Springer. 415, pp.7035-7045. ISSN 1618-2642. <https://doi.org/10.1007/s00216-023-04973-4>

7. Artículo científico. M. Alexandru Cobzariu; Rebeca Miranda Castro; Maria Jesus Lobo Castañón. 2023. Enzyme-assisted isothermal amplification of nucleic acids on the electrode surface. *Current Opinion in Electrochemistry*. Elsevier. 40, pp.101322. ISSN 2451-9111. <https://doi.org/10.1016/j.coelec.2023.101322>

8. Artículo científico. Cristina Muñoz San Martín; Ana Montero Calle; María Garranzo Asensio; et al; Susana Campuzano. 2023. First bioelectronic immunoplatform for quantitative secretomic analysis of total and metastasis-driven glycosylated haptoglobin. *Analytical and Bioanalytical Chemistry*. Springer. 415, pp.2045-2047. ISSN 1618-2642. <https://doi.org/10.1007/s00216-022-04397-6>

9. Artículo científico. Ramón Lorenzo Gómez; Alfonso Casero Álvarez; Rebeca Miranda Castro; Marcos García Ocaña; Juan Ramón de los Toyos; Noemí de los Santos Álvarez; María Jesús Lobo Castañón. 2022. A competitive assay for the detection of a neoepitope from alfa-1 chain of human collagen XI. *Talanta*. Elsevier. 240, pp.123196. ISSN 0039-9140. <https://doi.org/10.1016/j.talanta.2021.123196>

10. Artículo científico. Ramón Lorenzo Gómez; Rebeca Miranda Castro; Juan Ramón de los Toyos; Noemí de los Santos Álvarez; Maria Jesus Lobo Castañón. 2022. Aptamers targeting a tumor-associated extracellular matrix component: the human mature collagen XI α 1. *Analytica Chimica Acta*. Elsevier. 1189, pp.339206. ISSN 0003-2670. <https://doi.org/10.1016/j.aca.2021.339206>

C.2. Congress.

1. María Jesús Lobo Castañón; Raquel Sánchez Salcedo; M. Alexandru Cobzariu; Rebeca Miranda Castro; Noemí de los Santos Álvarez; Daniel Fernández Martínez; Luis J García Flórez. Exploring Long Noncoding RNA Dysregulation in Cancer Using Electrochemical Sensing Platforms. *Nanobalkan 2023 International Conference*. 2023. Oral.

2. Maria Jesús Lobo Castañón; Marta Perez López; Ana Díaz Fernández; Rebeca Miranda Castro; Noemí de los Santos Álvarez. Aptamer-based detection of emerging cancer biomarkers to guide cancer diagnosis and management. *Euroanalysis 2023*. Oral.

3. María Jesús Lobo Castañón; Raquel Sánchez Salcedo; M. Alexandru Cobzariu; Rebeca Miranda Castro; Noemí de los Santos Álvarez; Daniel Fernández Martínez; Luis J García Flórez. Bioelectrochemical platforms for the detection of long non-coding RNAs upregulated in cancer. *1st Regional Meeting of the ISE*. 2022. República Checa. Participativo – Keynote.

4. Noemí de los Santos Álvarez; Ramón Lorenzo Gómez; Rebeca Miranda Castro; María Jesús Lobo Castañón. Directed selection of aptamers for more specific cancer diagnosis. *3rd International Conference on Analytical and Bioanalytical Methods*. 2021. Oral

5. María Jesus Lobo Castañón; Ramón Lorenzo Gómez; Ana Díaz Fernández; Paula Gómez Mejjide; Sofia Tellado Arbesú; Rebeca Miranda Castro; Noemí de los Santos Álvarez. Aptamers against cancer biomarkers: selection and integration into electrochemical sensors. *Annual Meeting of the International Society of Electrochemistry*. 2021. República Popular Democrática de Corea. Keynote.

C.3. Projects and contracts.

1. Proyecto. 101169504, Scientific Training for post-translational modification detection in cancer screening- STRIM. HORIZON-MSCA-2023-DN-01-01. (Universidad de Oviedo). 01/10/2024-30/09/2028. 503.942,4 €. IP.

2. Proyecto. IDE/2024/000677, Actividad de investigación de Grupo de Electroanálisis. SEKUENS- Principado de Asturias. (Universidad de Oviedo). 01/01/2025-31/12/2027. 127.500 €. IP

3. Proyecto. RED2022-134120-T, ELECTROBIONET- Red de sensores y biosensores electroquímicos: retos ante la transformación digital e industrial. AEI. (Universidad de Oviedo). 01/06/2023-31/12/2025. 20.000 €. Coordinador.

4. Proyecto. PID2021-123183OB-I00, Electrochemical nucleic acid-based sensing platforms for emerging cancer biomarkers: Applications to clinical diagnosis. AEI. (Universidad de Oviedo). 01/09/2022-31/08/2025. IP.

5. Proyecto. Ensayo de diagnóstico molecular del cáncer de próstata a través de la detección de la fracción glicosídica de PSA basada en aptámeros. (Universidad de Oviedo). 01/12/2022-30/11/2024. 120.750 €. IP

6. Proyecto. Nuevas estrategias de diagnóstico para la detección temprana del adenocarcinoma ductal de páncreas (DIAGNOPANC). RTI2018-095756-B-I00. Ministerio de Ciencia e Innovación. (Universidad de Oviedo). 01/01/2019-30/09/2022. 145.200 €. IP

7. Proyecto. Grupo de electroanálisis Universidad de Oviedo. Ayuda a grupos de investigación. Desarrollo de nuevas herramientas de diagnóstico basadas en sensores de ADN (IDI/2018/000217. Consejería de Empleo, Industria y Turismo. Principado de Asturias. (Universidad de Oviedo). 01/01/2018-31/12/2020. 116.179 €.

8. Proyecto. Selección y modificación de receptores específicos para la detección de biomarcadores tumorales séricos. Ministerio de Economía y Competitividad.. (Universidad de Oviedo). 01/01/2016-30/06/2019. 89.450 €. IP

9. Proyecto. Desarrollo de nuevas estrategias de detección de alérgenos alimentarios (GRUPIN 14-25). Consejería de Empleo, Industria y Turismo.. (Universidad de Oviedo). 01/01/2015-31/12/2017. 126.400 €. IP

10. Contrato. Optimización de aptasensores electroquímicos para monitorización no invasiva Arquimea Arquimea Centro de Investigaciones Avanzadas SL. 25/04/2024-25/04/2025. 70.031,25 €.

11. Contrato. Caracterización de aptámeros mediante SPR LincBiotech SL. 01/09/2021-31/10/2021. 2.450 €.

12. Contrato. Selección de aptámeros para dos dianas definidas por LincBiotech LincBiotech SL. 02/07/2021-01/01/2022. 13.572 €.

13. Contrato. XVI Premio de Investigación sobre patologías por sensibilidad al gluten/trigo Asociación de Celiacos y Sensibles al gluten- Madrid. 01/01/2021-01/01/2023. 18.000 €.

14. Contrato. Estudio de proporcionalidad de la señal y límite de sensibilidad de la máquina de SPR denominada Indicator de Sensia Head Researcher SENSIA, S.L. 03/12/2012-03/01/2013. 1.594 €.

C.4. Participation in technology/knowledge transfer activities and exploitation of results.

1. Patent "Aptámeros específicos contra el gluten y métodos de detección del gluten asociado" fecha de prioridad 31/05/2012, N. de-los-Santos-Álvarez, S. Amaya-González, A. J. Miranda-Ordieres, M.J. Lobo Castañón. Universidad de Oviedo. ES2436861 B2 21/04/2014