CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION

CV date	3/7/2023

First name	Moyá Morán		
Family name	María Luisa		
Gender (*)	Female	Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail		URL Web	
Open Researcher and Contributor ID (ORCID) (*)			

(*) Mandatory

A.1. Current position

Position	Professor in Physical Chemistry		
Initial date	06/02/2009		
Institution	University of Seville		
Department/Center	Department of Physical Chemistry		
Country	Spain	Teleph. number	
Key words	Surfactants, calixarenes, polymers, carbón nanotubes, supramolecular systems, drug nanocarriers, gene transfection, VIH		

A.2. Previous positions (research activity interuptions, art. 14.2.b))

Period	Position/Institution/Country/Interruption cause
01/1986-10/1087	Ph grant
1987-1991	Assistant Professor
1991-1993	Associate Professor
1993-2009	Lecturer in Physical Chemistry

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
First Degree in Chemistry with an A	University of Seville	1985
PhD in Chemistry (sobresaliente *cum laude)*	University of Seville	1988

Part B. CV SUMMARY *(max. 5000 characters, including spaces)*

General indicators of quality of research production.
1.-Recognition of six periods of six-years of international quality research from the National Committee for the Assessment of the Research Action (CNEAI). 2.-Six Doctoral Thesis directed.
3.-Total citations: 3320 (excluding self-citations).
4.-Index h:28 (excluding self-citations (Scopus).
5.-Scientific articles:152, Book Chapters:5
Funding awarded: I have been working in research projects since 1986. I have developed a research group working on novel and innovative projects. I was (or am) responsible for the projects PB950527, PB98-1110, BQU2002-00691, CTQ2006-00597, CTQ2009-07478, FQM-274, P07-FQM-03056 and P012-FQM-1105. I collaborated in the projects LJC/GGM-55706, JTR/EB-45072, ARM/LD-43035, CTQ2006-27199-E/PPQ, UNSA13-3E-2302, UNSE13-1E-2032, GOP11-SE-16-0003, P20-01234 and FERTINAGRO BIOTECH, I.
Grant reviewer: Reviewer grant in the National Agency of Evaluation and Prospective (ANEP) since 1994, in the Council of Innovation and Industry of the Xunta de Galicia, in the National Agency for the Science and Technology Promotion of Argentina, and in the French National Research Agency (AN).
Manuscript reviewer: Journal of Colloid and Interface Science, Journal of Molecular Liquids, Colloid Surfaces B, Pharmaceutics, Antibiotics, RSC Advances, CPPC, etc.
Other merits: Recognition of two periods of international quality research and one period of management for the Anadalusian Commission of Evaluation and Prospective. We won the Bruker research First Prize at the University of Seville. I am a member of the Spanish Royal Society of Chemistry, RSEQ, and of the American Chemical Society. I have been vicepresident of the Colloids and Interfaces Group of the RSQE and I am a vocal of the Western Andalusia Section of the RSQE. I was co-editor of an special issue of Pharmaceutics in 2021. I have extensive experience in working in a non-Spain research environment through my doctoral and post-doctoral research.

In the last 10 years I have published 37 papers in indexed international scientific journals (26 in Q1), one book chapter, and 10 oral communications in international scientific meetings, 3 of them invited oral communications. I have directed 3 Doctoral Thesis. Our research group works on novel and innovative projects which span both the Chemistry - Pharmacy interface and the Chemistry–Medicine interface. Collaboration, both national and international, is key to our research strategy and has resulted in high impact publications. National collaborations with researchers from the Biochemistry, Chemical Engineering, Microbiology and Parasitology, and Organic Chemistry Departments of the Univ. of Seville, from the Biomedicine Institute of Seville, from the Andalusian Molecular Biology and Regenerative Medicine, from the Hospital Pharmaceutics Area of the Univ. Hospital Virgen Macarena of Seville, from the Physical Chemistry Department of the Univ. Complutense of Madrid, from the Genetic Engineering of Photosynthetic Microorganisms Unit, RENSMA Research Centre, and the Department of Chemical Engineering, Physical Chemistry and Material Science of the Univ. of Huelva. International collaborations with researchers from the Institute of Chemistry of the Postdam Univ. (Germany), from the Science Academy of Ukraine, from the Chemistry Department of the Univ. of Rio Cuarto (Argentina), and from the School of Pharmacy, Univ. of New Anglia (U.K.).
Particular achievements in the last 10 years include: 1-The reversibility of the protein denaturation and of the DNA compaction by cationic lipids have been shown; 2-Antineoplasic drugs nanocarriers have been developed, decreasing their toxicity. 3-Nanocarriers based on calixarenes, metallosurfactants of Ru(II) and polymers for nucleic acids as well as for antineoplasic drugs have been prepared. 4-The influence of the oligomeric degree and of the presence of a functional group at the end of the hydrophobic chains of cationic surfactants on

their DNA compaction efficiency has been examined. 5-The importance of hydrophobic interactions in the single-chained cationic surfactants-DNA complexation was demonstrated. 6-The transfection efficiency of several polymeric, calixarene-based and metallosurfactants-based nanocarriers have been demonstrated. 7-The difference between dispersion efficiency and binding efficacy of surfactants to carbon nanotubes has been clear up. Now the studies on the design and preparation of efficient drug, genetic material and vaccine nanocarriers are at work as well as the investigation of different species for the optimum dispersion of carbon nanotubes. The use of microvehicles for probiotics is also investigated.
Our group has been contributing to the formation of young researchers through the direction of Final Master's Work and Doctoral Thesis as well as through the Youth Employment Initiatives. Most of them are working in research centers, in various companies and one of them has created a new company, Pentalium Pharma (https://pentalium.com/. The divulgation of our research results has been done through scientific publications and scientific meetings, but also through divulgative articles in different newspapers and web pages.

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

C.1. Publications *(see instructions)*

1.- F. J. Ostos, J. A. Lebrón, P. López-Cornejo, …., **M. L. Moyá(CA)**. Self-aggregation in aqueous solution of amphiphilic cationic calix[4] arenes. Potential use as vectors and nanocarriers. J. Mol. Liq. 2020, 304, 112724 (1-14). **IF: 5065 Q1**. https://doi.org/10.1016/j.molliq.2020.112724
2.-M. L. Moyá, M. López-López, J. A. Lebrón,.... P. López-Cornejo(CA), Preparation and Characterization of New Liposomes. Bactericidal Activity of Cefepime Encapsulated into Cationic Liposomes. Pharmaceutics 2019, 2019, 11, 69 (1-12). **IF: 4.773 Q1**. https://doi:10.3390/pharmaceutics11020069.
3.-A. López, P. López-Cornejo, M. López-López,.... **M. L. Moyá(CA)**, Influence of the degree of oligomerization of surfactants on the DNA/ surfactant interaction. Colloid Surf. B 2019, 182, 110399. **IF: 4.389 Q1**. https://doi.org/10.1016/j.colsurfb.2019.110399.
4.- M. López-López, A. Fernández-Delgado, **M. L. Moyá**,..... P. López-Cornejo(CA) (9 autores). Optimized preparation of levofloxacin loaded polymeric nanoparticles. Pharmaceutics 2019, 11, 57 (1-13). **IF: 4.773 Q1**. https://doi:10.3390/pharmaceutics11020057.
5.-M. López-López, P. López-Cornejo, V. I. Martín,...., **M. L. Moyá(CA)**, Importance of hydrophobic interactions in the single-chained cationic surfactants-DNA complexation. J. Colloid Interface Sci. 2018, 521, 197-205. **IF: 6.361 Q1.** https://doi.org/10.1016/j.jcis.2018.03.048.
6.-M. López-López, P. López-Cornejo, J. A. Lebrón, F. J. Ostos, M. L. Moyá(CA), Binding and reativity under restricted geometry conditions: Aplicability of the pseudophase model to thermal and photochemical reactions. Curr. Opinion Colloid Interface Sci. 2017, 32, 23-28.**IF: 6.136 Q1.** https://doi.org/10.1016/j.cocis.2017.09.002.
7.- V. I. Martín, M. Angulo, P. López-Cornejo, M. López-López, M. J. Marchena, **M. L. Moyá(CA)**, Stoppering/unstoppering of a rotaxane formed between an N-heterocycle ligand containing surfactant:β-cyclodextrin pseudorotaxane and pentacyanoferrate(II) ions. J. Colloid Interfaface Sci. 2017, 497, 343-349. **IF: 5.091 Q1**. https://doi.org/10.1016/j.jcis.2017.03.019. **8.-** V. I. Martín, F. J. Ostos, M. Angulo, A. Márquez, M. López-López, P. López-Cornejo. A. T. Carmona, **M. L. Moyá(CA**), Host-guest interactions between cyclodextrins and surfactants with functional groups at the end of the

hydrophobic tail. J. Colloid Interfaface Sci. 2017, 491, 336- 348. **IF: 5.091 Q1.** https://doi.org/10.1016/j.jcis.2016.12.040.
9.-V. I. Martín, B. Sarrión, M. López-López, P. López-Cornejo, I. Robina, **M. L. Moyá(CA**). Reversibility of the interactions between a novel surfactant derived from lysine and biomolecules. Colloids Surf. B 2015, 135, 346-356. **IF: 4.152. Q1**. https://doi.org/10.1016/j.colsurfb.2015.07.076.
10.- V. I. Martín, A. Rodríguez, A. Maestre, **M. L. Moyá (CA)**, Binding of cationic single-chain/dimeric surfactants to bovine serum albumin. Langmuir 2013, 29, 7629-7641. **IF: 4.70. Q1.** https://doi.org/10.1021/la400789k.

C.2. Congress

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G. Fernández Catá, C. Searlez, V. I. Martín, **M. L. Moyá** y L. J. Álvarez. Estructuras micelares de surfactants via dinámica molecular. Internacional. IV Congreso de Fisicoquímica Teórica y Computacional. **Invited oral communication**. Noviembre 2012. Altos de Pipe (Venezuela)

M. L. Moyá, Victoria I. Martín y Amalia Rodríguez. Novel surfactants with phenyl and cyclohexyl rings in the head group. Internacional. CLAFQO 2013**. Invited oral communication**. Abril 2013. Foz do Iguazú (Brasil)

M. L. Moyá, Pilar López, A. Rodríguez, M. López y V. I. Martín. Chemical reactions as sensors to determine DNA conformational changes in solution. Internacional.SIS2014. **Invited oral communication**. Junio 2014. Coimbra (Portugal)

P. López-Cornejo, J. A. Lebrón, F. J. Ostos, **M. L. Moya**, M. López-López. Ruthenium-based micelles and liposomes used as nanovectors with pharmacological and pharmaceutical applications. Frontiers in Chemistry and Drug Discovery and Pharmaceutics and Drug Delivery Research. **Invited conference.** Diciembre 2-3 2019. Madrid (Spain)

Apart from these inveted oral communications, I have contributed with 16 additional oral communications to different international scientific meetings (ANQUE2012, RICI5, RICI6, RICI7, ICCK2013, ICCK2015, XXXI CAFQI, 24th IUPAC, NanoSpain2016, 2nd Spanish Conferenvce on Biomedical Appliations of Nanomaterials, 2nd Spanish Conference on Biomedical Applications of Nanotechnology).

C.3. Research projects

In the last 10 years I was (or am) responsible for the projects CTQ2009-07478, FQM-274, P07-FQM-03056 and P012-FQM-1105. I collaborated in the projects UNSA13-3E-2302, UNSE13-1E-2032, GOP11-SE-16-0003, P20-01234, and FERTINAGRO BIOTECH, I.