

CURRICULUM VITAE ABREVIADO (CVA)

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

Part A. PERSONAL INFORMATION

First name	María de los Desamparados (Amparo)		
Family name	López Rubio		
Gender (*)	Female	Birth date (dd/mm/yyyy)	05/05/1978
Social Security, Passport, ID number	24375702-A		
e-mail	amparo.lopez@iata.csic.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)		0000-0001-6469-9402	

(*) *Mandatory*

A.1. Current position

Position	Investigador Científico del CSIC (permanent scientist)		
Initial date	07/05/2014		
Institution	Spanish National Research Council (CSIC)		
Department/Centre	Food Preservation	Institute of Agrochemistry and Food Technology (IATA)	
Country	Spain	Phone number	963900022
Keywords	Biopolymers, Food structure, functionality, valorisation, scattering techniques		

A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country/Cause of the interruption
2002-2006	PhD Fellow/IATA-CSIC, UPV/Spain
2006-2008	Postdoctoral Fellow/ Bragg Institute, ANSTO/Australia
2008-2011	Juan de la Cierva Postdoc/IATA-CSIC/Spain
2011-2014	Ramon y Cajal Postdoc/IATA-CSIC/Spain
2014-2021	Científico Titular OPIs/IATA-CSIC/Spain
2019-	Deputy Director/IATA-CSIC/Spain

A.3. Education

PhD, Graduate Degree	University/Country	Year
Agronomical Engineer	Universidad Politécnica de Valencia (UPV)	2002
PhD in Food Science & Technology	Universidad Politécnica de Valencia (UPV)	2006

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

Amparo López-Rubio is a permanent Researcher of IATA-CSIC from 2014 and Deputy Director of the Institute since 2019. She received her Ph.D. in Food Science (2006) at the Polytechnic University of Valencia (UPV, Spain) in food packaging, awarded with the “Premio Extraordinario de Tesis Doctoral” from UPV and with the second prize to best doctoral thesis by the “Specialized Polymer Group” from the Spanish Royal Society of Physics (SRSP). After several pre- and postdoctoral stays in top research institutions around the world (KTH, Sweden; ANSTO, Australia; Hasylab, Germany; ANL, USA) where she broadened her

knowledge about advanced materials characterization tools, she returned to IATA to open up innovative research lines, being pioneer in the use of X-ray and neutron scattering techniques to understand food structure and its links to functionality, as well as on the use of nanotechnologies in the food area (being an internationally recognized expert on nanoencapsulation for food applications, with 2 highly cited papers in this topic and being the third more prolific author in the world in this area according to the WOS). The X-ray-based method she established in 2008 to quantify starch crystallinity has been globally adopted by the research community and still receives an average of 50 citations each year. She has published over 190 scientific articles in peer-reviewed journals (>90% Q1 and >40% D1 in the period 2017-2021) with over 7700 citations (H-index of 51 on Web of Science), 8 patents (3 of them under exploitation), as well as numerous book chapters and conference proceedings, with important contributions in the field of sustainable materials for food packaging. She is editor of several books, special issues and of the journals Q1 journals Food Chemistry (IF 9.23), International Journal of Biological Macromolecules (IF 6.95) and Nanomaterials (IF 5.72). She has been expert for project evaluation for a number of research granting agencies across the globe (ANSTO, Australia; AAFC, Canada; FONDECYT, Chile; MIUR, Italy; COST expert evaluator, Europe, amongst others), highlighting her appointment as FWO (Flanders Research Foundation, Belgium) expert for the panel “Chemical Engineering, Material Sciences” (from 2015-2017 and 2018-2020) being Scientific Chair of the W&T 6 fellowship panel from 2019 to 2020. She is Fellow of the Spanish Royal Society of Physics, member of the Nanotechnology group from AESAN and part of the Governing Board of the Interdisciplinary Platform for Sustainable Plastics (SUSPLAST) from CSIC. She has been principal investigator of 3 Spanish National Plan grants (2013-2015; 2016-2018 and 2019-2022), 2 Alba projects, 6 CSIC projects, 1 European ERANET project, 1 Horizon Europe project, 6 regional projects and numerous industrial contracts (working with food companies such as Mahou-San Miguel S.A., Argal S.A. or Bodegas Matarromera or pharma companies such as Casen Fleet Laboratories), having secured public and private funding worth over 3.5 M€ while working at IATA. She is also very compromised with research training (having supervised 9 PhD thesis and 6 more ongoing, being associate professor of the University of Valencia and participating in several international Master courses) dissemination (being chair of the Dissemination Committee of IATA and having participated, only in 2022, in 10 dissemination events).

C.1. Selected Publications (last 5 years)

- B. Tomadoni, M.J. Fabra, **A. López-Rubio*** (2022). Electrohydrodynamic processing of phycocolloids for food-related applications: recent advances and future prospects. Trends in Food Science & Technology 125, 114-125. <https://doi.org/10.1016/j.tifs.2022.05.009>
- M. Martínez-Sanz, L.P. Gomez-Barrio, M. Zhao, B. Tiwari, S. Halvor Knutsen, S. Ballance, H.K. Zobel, A. Ekman Nilsson, C. Krewer, K. Östergren, A. López-Rubio (2021). Alternative protocols for the production of more sustainable agar-based extracts from *Gelidium sesquipedale*. Algal Research, 55, 102254. <https://doi.org/10.1016/j.algal.2021.102254>
- D.A. Mendez, M.J. Fabra, A. Martínez-Abad, M. Martínez-Sanz, M. Gorria, **A. López-Rubio*** (2021). Understanding the different emulsification mechanisms of pectin: comparison between watermelon rind and two commercial pectin sources. Food Hydrocolloids, 120, 106957. <https://doi.org/10.1016/j.foodhyd.2021.106957>
- M. Martínez-Sanz, V. Cebrián-Lloret, J. Mazarro, A. López-Rubio (2020). Improved performance of less purified cellulosic films obtained from agar waste biomass. Carbohydrate Polymers, 233, 115887 <https://doi.org/10.1016/j.carbpol.2020.115887>
- I. Benito-Gonzalez, **A. López-Rubio**, L.G. Gómez-Mascaraque, M. Martínez-Sanz (2020). PLA coating improves the performance of renewable adsorbent pads based on cellulosic aerogels from aquatic waste biomass. Chemical Engineering Journal, 390, 124607. <https://doi.org/10.1016/j.cej.2020.124607>
- Martínez-Sanz, A. Ström, P. Lopez-Sanchez, S. Halvor Knutsen, S. Ballance, H.K. Zobel, A. Sokolova, E.P. Gilbert, **A. López-Rubio** (2020). Advanced structural characterisation of agar-



based hydrogels: rheological and small angle scattering studies. *Carbohydrate Polymers*, 236, 115655. <https://doi.org/10.1016/j.carbpol.2020.115887>

- A. Alehosseini, L.G. Gómez-Mascaraque, M. Martínez-Sanz, **A. López-Rubio*** (2019). Electrospun curcumin-loaded protein nanofiber mats as active/bioactive coatings for food packaging applications. *Food Hydrocolloids*, 87, 758-771. <https://doi.org/10.1016/j.foodhyd.2018.08.056>

- M. Martínez-Sanz, E. Erboz, C. Fontes, **A. López-Rubio** (2018). Valorization of *Arundo donax* for the production of high-performance lignocellulosic films. *Carbohydrate Polymers*, 199, 276-285. <https://doi.org/j.carbpol.2018.07.029>

- M.J. Fabra, M. Martínez-Sanz, L.G. Gómez-Mascaraque, R. Gavara, **A. López-Rubio** (2018). Structural and physicochemical characterization of novel thermoplastic corn starch films containing microalgae. *Carbohydrate Polymers* 186, 184-191. <https://doi.org/10.1016/j.carbpol.2018.01.039>

C.2. Congresses (invited or keynote oral presentations from last 5 years)

- **A. López-Rubio (Keynote presentation)**. Estrategias de valorización para mejorar la sostenibilidad de la cadena alimentaria. Congreso Internacional de Biotecnología FEMSA. Monterrey (México). 24-26 August 2022.

- **A. López-Rubio**, I. Benito-González, M. Martínez-Sanz (**Invited oral presentation**). "Aerogels from waste valorisation". Aerogels Meeting 2022. Coimbra (Portugal). 1-2 March 2022.

- **A. López-Rubio***, M. Martínez-Sanz, E.P. Gilbert (**Keynote presentation**). "Small angle scattering: A essential tool for our future food system". 4th Food Structure and Functionality Symposium. Online (due to COVID situation). 19-20th Oct 2021. International congress

- **A. López-Rubio (Keynote Presentation)**. "Extraction and valorisation of seaweed polysaccharides". EPNOE 2019 - 6TH EPNOE International Polysaccharides Conference. Aveiro (Portugal), 7-9 Oct 2019.

- **A. López-Rubio (Keynote presentation)**. "Nanotecnologías para aplicaciones alimentarias". V National Congress of Nanotechnology (CNN5), Pucón (Chile), 2018.

C.3. Selected research projects (last 5 years)

- New VALue landscapes for plant PROtein Pathways (VALPRO Path). Financial entity: Horizon Europe. Topic: HORIZON-CL6-2021-FARM2FORK-01-02. 2022-2025. Granted budget: 277.875 €. **IP from IATA: Amparo López Rubio**

- SLIMFOOD: Novel oleogels for the food industry. Financial entity: AEI, Ministerio de Ciencia e Innovación, Proyectos Prueba de Concepto 2022. 2022-2024. Granted Budget: 150.000€. **IP: Amparo López Rubio**

- PANACEA: Residuos de Pleurotus como fuente Alternativa de NutrACEuticos Avanzados. Financial entity: Fondos NextGeneration-EU, GVA (AGROALNEXT). Granted Budget: 223.963 €. Sept2022-Dec 2024. **IPs: Amparo López Rubio/MCarmen Collado**

- VALorización integral y continua de residuos agrícolas de la Comunidad Valenciana para la obtención de ingredientes alimentarios fUnciOnales (VALUÓS). Financial entity: Agencia Valenciana de Innovación (AVI), Proyectos Estratégicos en Cooperación, INNEST/2021/27. 2021-2023. Granted Budget: 218.072€. Participating entities: IATA-CSIC, AINIA and Postres Lacteos Romar S.L. **Coordinating IP: Amparo López Rubio**

- Enhancing technological and nutritional food properties using gels and emulsions formulated with non-purified carbohydrates obtained from alternative sources. Financial entity: Ministerio de Ciencia, Innovación y Universidades, RTI2018-094268-B-C22. 2019-2022. Granted Budget: 323.433€ (157.058€ for IATA). Coordinating IP: Prof. O. Martin-Belloso (ULleida). **IP from IATA: Amparo López Rubio**



- Valorización de *Posidonia oceanica* para el desarrollo de materiales de envase biodegradables (POSIMAT). Financial entity: Agencia Valenciana de Innovación (AVI), INNVAL10/19/009. 2019-2020. Granted Budget: 138.220€. IP: **Amparo Lopez Rubio**.
- Extraction and characterization of BIOactives and CARBohydrates from seaweeds and seagrasses FOR FOOD-related applications (BIOCARB-4-FOOD). Financial entity: Horizon 2020 Eranet SUSFOOD2. ~1.000.000€ (150.000€ for IATA). 2018-2021. **Coordinating IP: Amparo Lopez Rubio**
- Development and Characterization of a Bio-based High Barrier Multilayer Concept with Active and Bioactive Properties for Food Packaging (MULTIBIOPACK) (Ref. AGL2015-63855-C2-1). Proyectos de Investigación Fundamental no orientada-2015, Financial entity: MINECO. 150.000€. 2016-2018. **Coordinating IP: Amparo Lopez Rubio/J.M. Lagaron**.

C.4. Technology/Knowledge transfer (selected contracts and patents last 10 years)

Selected contracts

- Empleo de sarmientos procedentes de la poda de vid para la innovación en la fabricación de pasta de celulosa, papel y cartón - VINEBOX". Financial entities: Pago de Carraovejas S.L.U., Bodega Matarromera S.L. & ENCE Energía y Celulosa S.A. Granted Budget: 60.000€. 2023-2024. IP: Amparo López Rubio
- Caracterización de algas y desarrollo de materiales derivados de las mismas. Financial entity: Hispanagar S.A. 2019-2023. Granted Budget: 145.200 €. IP: Amparo López Rubio
- Obtención de componentes bioactivos para el sector agroalimentario mediante procesos de bioconversión y biorrefinería de subproductos de origen animal y vegetal (BIOPRO/CDTI-CIEN). Financial entities: Mahou, Matarromera, Anecoop, Elmubas, Kimitec, Argal. Granted Budget: ~200.000€. 2017-2021. IP: Amparo López Rubio
- Desarrollo de nuevos materiales para aromaterapia en interior de vehículos-Active Odour. Financial entity: Faurecia Interior Systems SALC, Valencia. Granted Budget: 45.000€. 2015-2017. IP: Amparo Lopez Rubio
- Odorize the compartment of the car by aroma encapsulation release. Entidad financiadora: Faurecia Interior Systems SALC, Valencia. 28.000€. February-June 2015. IP: Amparo López Rubio
- Optimización de formulaciones de estructuras de encapsulación para mejorar la estabilidad a temperatura ambiente de la cepa de *Bifidus infantis*. Entidad financiadora: Laboratorios Casen Fleet, S.L.U. 20.000€. July 2012-January 2013. IP: Amparo López Rubio

Selected patents

- M. Martínez-Sanz, **A. López-Rubio**, I. Benito-González. Procedimiento para la preparación de aerogeles hidrofóbicos. PCT/ES2020/070607. Priority country: Spain. Priority date: 01/10/2019. Holder entity: CSIC. Patent licenced to: Aerofybers S.L.
- **A. López-Rubio**, M. Martínez-Sanz, C. Fontes & M.J. Fabra. Procedimiento para la obtención de oleogeles a partir de polisacáridos sulfatados. PCT/ES2019/070530. Priority country: Spain; Priority date: 26/07/2019. Holder entity: CSIC. Under negotiation for licencing to a couple of companies.
- **A. López-Rubio**, J.M. Lagaron, M. Aceituno Medina & S. Mendoza Diaz. Micro-, submicro y nanoestructuras basadas en proteína de amaranto. PCT/ES2012/070719. Priority country: Spain; Priority date: 17/10/2012. Holder entities: CSIC (90% y Universidad Autónoma de Querétaro (10%). Company exploiting it: Bioinicia S.L.
- **A. López-Rubio** & J.M. Lagaron. Procedimiento de obtención de micro-, submicro- y nanocápsulas basado en proteínas del suero de la leche. PCT/ES2012/070455. Priority country: Spain; Priority date: 21/06/2012. Holder entity: CSIC. Company exploiting it: Bioinicia S.L.