# Curriculum Vitae

## Personal information

Nuria Roldán

## Work experience

July 2023 – present. Advisor, PETA Science Consortium International e.V., Germany

- Advising the Science Consortium on inhalation toxicity testing
- Representing the Science Consortium as a stakeholder in international organisations
- Collaborating with government agencies and industry to advance the use of reliable and relevant non-animal testing approaches

January 2019 – June 2023. Project Lead, AlveoliX AG, Switzerland

- Planning, coordinating and reporting of complex lung *in vitro* systems studies for toxicity, drug safety and efficacy studies
- Developing and maintaining key relationships with clients, providing tailored solutions to their testing needs
- Co-managing and coordinating the project management team
- Developing novel organ-on-a-chip models (ung and gut) and assays for different endpoint analysis
- Supervising and implementing corporate science dissemination strategy

January 2018 – December 2018. Research Assistant, ARTORG Center for Biomedical Engineering Research, University of Bern, Switzerland

- Project management and experimental development of lung injury-on chip models
- Assay development, data analysis, interpretation and reporting
- Scientific writing and science communication
- Student mentoring and supervision

October 2012 – December 2017. PhD student & Research associate, Biochemistry and Molecular Biology Department, Complutense University of Madrid, Spain

- PhD project on the biophysical and biochemical characterization of lung lipoprotein complexes resembling pulmonary surfactant incorporating recombinant forms of human surfactant protein C and the study of their effect on lung homeostasis through their interaction with alveolar macrophages
- Visiting PhD fellow at Medizinische Hochschule Hannover (3 months, Germany), Memorial University of Newfoundland (2 months, Canada), Åbo Akademi (2 months, Finland), and Université Libre de Bruxelles (1 month, Belgium)
- Assistant instructor during practical courses in Biochemistry and Molecular Biology
- Graduate and undergraduate student co-supervision

## Education and training

October 2012 - May 2017. PhD in Biochemistry, Molecular Biology and Biomedicine (*Cum Laude*) Complutense University of Madrid, Spain

September 2011 - September 2012. MSc in Biochemistry, Molecular Biology and Biomedicine, Complutense University of Madrid, Spain

September 2006 - July 2011. MSc and BSc in Biotechnology, University Pablo de Olavide, Spain

## Additional information

### Publications


Sengupta A, Roldan N, et al. A New Immortalized Human Alveolar Epithelial Cell Model to Study Lung Injury and Toxicity on a Breathing Lung-On-Chip System. Front Toxicol. 2022 Jun 17;4:840606. doi: 10.3389/ftox.2022.840606

Castillo-Sánchez JC, Roldán N, et al. The highly packed and dehydrated structure of preformed unexposed human pulmonary surfactant isolated from amniotic fluid.. Am J Physiol Lung Cell Mol Physiol. 2022 Feb 1;322(2):L191-L203. doi: 10.1152/ajplung.00230.2021

Kiener M, Roldan N, et al., Human-Based Advanced in vitro Approaches to Investigate Lung Fibrosis and Pulmonary Effects of COVID-19. Front Med (Lausanne). 2021 May 7;8:644678. doi: 10.3389/fmed.2021.644678

Sehlmeyer K, Ruwisch J, Roldan N, Lopez-Rodriguez E. Alveolar Dynamics and Beyond - The Importance of Surfactant Protein C and Cholesterol in Lung Homeostasis and Fibrosis. Front Physiol. 2020 May 5;11:386. doi: 10.3389/fphys.2020.00386

Ruwisch J, Sehlmeyer K, Roldan N, Garcia-Alvarez B, Perez-Gil J, Weaver TE, Ochs M, Knudsen L, Lopez-Rodriguez E. Air Space Distension Precedes Spontaneous Fibrotic Remodeling and Impaired Cholesterol Metabolism in the Absence of Surfactant Protein C. Am J Respir Cell Mol Biol. 2020 Apr;62(4):466-478. doi: 10.1165/rcmb.2019-0358OC

Lopez-Rodriguez E, Roldan N, Garcia-Alvarez B, Pérez-Gil J. Protein and lipid fingerprinting of native-like membrane complexes by combining TLC and protein electrophoresis. J Lipid Res. 2019 Feb;60(2):430-435. doi: 10.1194/jlr.D090639

Roldan N, Pérez-Gil J, Morrow MR, García-Álvarez B. Divide & Conquer: Surfactant Protein SP-C and Cholesterol Modulate Phase Segregation in Lung Surfactant. Biophys J. 2017 Aug 22;113(4):847-859. doi: 10.1016/j.bpj.2017.06.059

Roldan N, Nyholm TKM, Slotte JP, Pérez-Gil J, García-Álvarez B. Effect of Lung Surfactant Protein SP-C and SP-C-Promoted Membrane Fragmentation on Cholesterol Dynamics. Biophys J. 2016 Oct 18;111(8):1703-1713. doi: 10.1016/j.bpj.2016.09.016

Roldan N, Goormaghtigh E, Pérez-Gil J, Garcia-Alvarez B. Palmitoylation as a key factor to modulate SP-C-lipid interactions in lung surfactant membrane multilayers.. Biochim Biophys Acta. 2015 Jan;1848(1 Pt A):184-91. doi: 10.1016/j.bbamem.2014.10.009

## Projects

## Memberships

March 2024 - present. European Society of In Vitro (ESTIV)

January 2024 - present. European Organ-on-Chip Society (EUROoCs)

May 2022 – present. International Micro Physiological Systems Society (iMPSs)

January 2017 – present. European Respiratory Society (ERS) /Sociedad Española de Neumología y Cirugía Torácica (SEPAR)

January 2013 – December 2017. Spanish Society of Biophysics - Sociedad Española de Biofísica (SBE)

May 2010 – December 2017. Sociedad Española de Bioquímica y Biología Molecular (SEBBM)

## Other Relevant Information