

MIREIA VILAR HERNÁNDEZ

Date of birth: 03/04/1997
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RESEARCH INTEREST

- Development of nanoformulations (polymeric micelles, polymeric nanoparticles, lipidic nanoparticles or hydrogels) for administration of different anticancer drugs, genetic material, biomolecules, among other molecules, through different administration routes.
- Functionalization of nanosystems surfaces accordingly to the desired target and disease.
- Nanosystems physico-chemical characterization using a wide-range of advanced techniques for materials characterization.
- Preclinical validation of the proposed formulations using several in vitro assays and different molecular biology techniques.

WORK EXPERIENCE

PhD student - DIRNANO 05/2021 - present
EU - Marie Skłodowska-Curie Actions
Lipocoat & University of Twente, Enschede, Netherlands.

Master's Final Thesis 02/2020 - 07/2020
Drug Delivery and Targeting - CIBBIM Vall
Hebron Institute of Research, Barcelona, Spain.

Solid Lipid Nanoparticles for Cancer Treatment: A Review.

Junior Researcher 09/2019 - 02/2020
Drug Delivery and Targeting - CIBBIM Vall
Hebron Institute of Research, Barcelona, Spain.

Master's Internship

Bachelor's Final Thesis 02/2019 - 07/2019
Drug Delivery and Targeting - CIBBIM Vall
Hebron Institute of Research, Barcelona, Spain.

Development and Validation of targeted Polymeric Micelles for Cancer Treatment.

Junior Researcher 09/2018 - 02/2019
Drug Delivery and Targeting - CIBBIM Vall
Hebron Institute of Research, Barcelona, Spain.

Bachelor's Internship

EDUCATION

Master's Degree in Bioinformatics and Biostatistics 02/2021 - present
Universitat Oberta de Catalunya, Barcelona, Spain.

Master's Degree in Translational Biomedical Research 09/2019 - 07/2020
Universitat Autònoma de Barcelona, Barcelona, Spain.








Bachelor's Degree in Nanoscience and Nanotechnology 09/2015 - 07/2019
Universitat Autònoma de Barcelona, Barcelona, Spain.

SKILLS








Languages

Catalan Native
Spanish Native
English Advanced (C1)

Professional Skills

Cell Culture 
Nanoparticles Production 
RT-PCR 
Flow Cytometry 
DLS 
TEM, SEM, AFM, STM 
Immunohistochemistry 

Programmes

Microsoft Office and IOS 
Maxima 
Gaussian 
GraphPad 
FCS Express 
Zetasizer 
7500 SDS and qbase+ 

♥ VOLUNTEERING

Monitor 07/2014 - 12/2018
Esplai la Fera, Terrassa, Spain.

Esplai la Fera is an organization with no lucrative aim which prepares and performs activities for children.

★ STRENGTHS

Team-working

Organization

Comunicative

Empathetic

Proactive

Hard-working

Responsible

☰ PUBLICATIONS

Thermo-responsive hydrogels for cancer local therapy: Challenges and state-of-art 09/2021

International Journal of Pharmaceutics. 606, 120954 Elsevier, 09/2021.

DOI: 10.1016/j.ijpharm.2021.120954

Rafael, D; Roca Melendres, M.M; Andrade, F; Montero S, Matínez-Tucharte, F, **Vilar-Hernández, M**; Durán-Lara, E.F; Schwartz, S.Jr; Abasolo, I.

Polymeric Micelles targeted against CD44v6 receptor increase Niclosamide efficacy against Colorectal Cancer Stem Cells and reduce Circulating Tumor Cells 01/2020

Journal of Controlled Release. 331, pp. 198 Elsevier, 01/2021.

DOI: 10.1016/j.jconrel.2021.01.022

Andrade, F; Rafael, D; **Vilar-Hernández, M**; Montero, S; Martínez-Trucharte, F; Seras-Franzoso, J; Díaz-Riascos, Z. V; Bouldosa, A; García-Aranda, N; Cámara-Sánchez, P; Nestor, M; Abasolo, I; Sarmiento, B; Schwartz, S. Jr.

Intracellular Delivery of Anti-SMC2 Antibodies against Cancer Stem Cells 02/2020

Pharmaceutics. 12 - 2, pp. 185. MDPI, 02/2020.

DOI: 10.3390/pharmaceutics12020185

Montero, S; Seras-Franzoso, J; Andrade, F; Martinez-Trucharte, F; **Vilar-Hernández, M**; Quesada, M; Xandri, H; Arango, D; Abasolo, I; Rafael, D; Schwartz, S. Jr.

📄 POSTERS

CD44v6-Targeted Polymeric Micelles for the Treatment of Advanced Colorectal Cancer 12/2019
13a Jornada Científica VHIR

Andrade, F; Rafael, D; **Vilar-Hernández, M**; Martínez-Trucharte, F; Montero, S; Seras-Franzoso, J; Díaz Riascos, Z. V; Bouldosa, A; García-Aranda, N; Cámara-Sánchez, P; Abasolo, I; Sarmiento, B; Schwartz, S. Jr.