CARLOS PAVÓN REGAÑA

CHEMIST

RESEARCH INTERESTS

- Development of synthetic vehicles (hydrogels or nanoformulations) for encapsulation of different drugs or genetic material (pDNA, siRNA) to treat cancer.
- Nanoparticles surface modification to achieve a specific targeting against the cells of interest
- Physic-chemical characterization using different advanced techniques.
- Preclinical validation using *in vitro* assays and molecular biology techniques.

CONTACT INFORMATION

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/Carlos_Pavon5

REFEREES CONTACT

- Dr. Ibane Abasolo, PhD
  Drug Delivery and Targeting group leader (VHIR)
  ibane.abasolo@vhir.org
- Dr. Ayan Samanta, PhD
  Polymer Chemistry group leader (Uppsala University)
  ayan.samanta@kemi.uu.se

LANGUAGES

Spanish — Mother tongue

Catalan — Mother tongue

English — C1.2 Advanced level accredited by EIM

German — A1.1 level accredited by EIM

WORK EXPERIENCE

MARIE CURIE PHD FELLOW IN CHEMICAL SCIENCES
Università degli Studi di Padova (UniPD)
October 2021 -

ACADEMIC FORMATION

MSC IN TRANSLATIONAL BIOMEDICAL RESEARCH
Vall d'Hebron Institut de Recerca (VHIR)
September 2020 - July 2021

- Average grade: 8.4/10.
- Internship student at CIBBIM - Nanomedicine - Drug Delivery and Targeting group from Dr. Abasolo'.
- Master's Thesis title: *Rational Design of Polymeric Nanoparticles for Gene Therapy.*

BSC IN CHEMISTRY
Universitat de Barcelona (UB)
September 2016 - June 2020

- Average grade: 7.2/10.
- ERASMUS+: Internship at Uppsala University (UU) in Sweden. Doing the Bachelor's Thesis whose title was *Modulation of Gelatine Hydrogel Properties by Introducing Zwitterionic Crosslinking Strategies* in Dr. Samanta's Polymer's Chemistry group.

OTHER ACADEMIC FORMATION

SUMMER RESEARCH FELLOWS
Universitat de Barcelona (UB) | July 2016

- Three weeks stay in the Organometallics' group working with Dr. Granell synthesising organometallic compounds for cancer diagnostics.

Institut Químic de Sarrià (IQS) | July 2015

- Research Project: Els diabètics tenen problemes… amb les fruites?
- Acquired expertize: Analysis by Liquid Chromatography with Refractive Index (HPLC-RI) with Dr. Broto supervision.

TECHNICAL SKILLS

- Delivery Systems Synthesis:
  - Gelatin Nanoparticles synthesis by double desolvation method
  - PLGA Nanoparticles synthesis by nanoprecipitation and double emulsion
  - Gelatin Sulfobetaine hydrogels synthesis
- Delivery Systems Physic-chemical characterization:
  - Rheology, Swelling and Solid Content tests and TNBS assay
  - Nanoparticles size and surface charge (DLS)
- Delivery systems in vitro-preclinical validation and functional assays
  - Cytotoxicity assays: MTT
  - Transfection Efficacy of gene delivery systems: Fluorescence Microscopy and Flow Cytometry
- Informatic Skills
  - Microsoft Office (Word, PowerPoint, Excel)
  - Graphpad, FACS express4 and Zetasizer software

PUBLICATIONS

1. Leliopoulos, Christos; Jamadi Khiabani, Mahsa; Pavon, Carlos; Hilborn, Jöns; Samanta, Ayan. *Hyperelastic gelatin hydrogel by sulfobetaine interactions.* (*Under preparation*)

AWARDS

2nd Prize given by *Societat Catalana de Química* in the X Ed. for the Research Project whose title was *Els diabètics tenen problemes...amb les fruites?* (2016)