



ENELIA CRISTINA PELÁEZ-GUTIÉRREZ

M.Sc. Biotechnology - Ph.D. Chemistry

I am a creative and enthusiastic professional who has been working on projects for clinical applications based on optical biosensor devices. I have worked in multidisciplinary environments, such as genetics, pathology, immunology, electronics and molecular biology. I have had contact with different research centres and universities, as well as in hospital centres for the management of pathogenic samples. I am currently looking forward to starting a new position in research projects or medical science affairs.

CONTACT



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CONNECT



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PROFESSIONAL SKILLS

Optical biosensing system

SPR, biofunctionalization strategies, immunoassays, bioapplications, nanomedicine, microfluidics

Molecular biological tools

PCR, cloning, western blot, expression and purification of biomolecules, hybridization, ELISA

Medical affairs

Clinical diagnosis, Therapeutic drug monitoring, infectious diseases, tuberculosis, celiac disease, colorectal cancer, biomarkers, cardiovascular diseases.

Chemical instrumental techniques

Gas, HPLC Chromatography, mass spectrometry, RMN

Software

Microsoft Office, Origin, GraphPad Prism, Matlab, Chemdraw, Autodesk Inventor

Personal skills

Open attitude, curious, persistent, proactive, self-motivated, self-confident, creative. Good communication skills in public.

LANGUAGES

Spanish – Native speaker
English – High level (C1)
French – Basic level



WORK EXPERIENCE

- **2017-2019. RESEARCH TECHNICIAN** / ICN2, Barcelona (Spain)
Research and development and project management based on optical biosensors used for clinical applications: PreDICT, Urinetest, Colontest, Tuberculosis test, POC for sintrom follow-up.
- **2015-2016. RESEARCH INTERNSHIP** / ICN2, Barcelona (Spain)
Project: "HspX protein tuberculosis biomarker evaluated in sputum samples by plasmonic biosensing".
- **2014-2015. RESEARCH ENGINEER** / Corpogen Corporation, Bogotá (Colombia). Project: "Expression and purification of the recombinant protein HspX as tuberculosis biomarker".
- **2013-2017. RESEARCH ENGINEER** / CIDEI, Bogotá (Colombia).
Project: "New biosensing system based on nanotechnology for the detection of tuberculosis markers, using layer-by-layer deposition techniques in QCM".
- **2011-2013. UNIVERSITY LECTURER** / National University of Colombia, Medellín (Colombia). Teaching activities in theoretical and practical subjects of chemistry, biochemistry and organic chemistry.



EDUCATION

- **2015-2020. Ph.D. IN CHEMISTRY**
Autonomous University of Barcelona (Spain).
- **2011-2015. M.Sc. BIOTECHNOLOGY.**
National University of Colombia, Medellín (Colombia).
- **2004-2009. B.Sc. CHEMISTRY.**
Technological University of Pereira, Pereira (Colombia).



ARTICLES

- A compact SPR biosensor device for the rapid and efficient monitoring of gluten free diet directly in urine. *Anal. Bioanal. Chem.*, (March 23, 2020).
- Detection and quantification of the HspX antigen in sputum samples using plasmonic biosensing: toward a real POC for tuberculosis diagnosis. *ACS infect. Dis.* (2020), 6(5), 1110-1120.
- Label-Free Nanoplasmonic Biosensing of Cancer Biomarkers for Clinical Diagnosis. *Biomimetic Sensing. Methods in Molecular Biology*, vol 2027 (2019). Chapter 10. pp. 115-140.
- Nanoplasmonic biosensor device for the monitoring of acenocoumarol therapeutic drug in plasma. *Biosensors and Bioelectronics*, 119, (2018), 149-155.
- A label-free nanostructured plasmonic biosensor based on Blu-ray discs with integrated microfluidics for sensitive biodetection. *Biosensors and Bioelectronics*, 96, (2017), 260-267.
- Design of a gravimetric biosensor using deposition of polyelectrolytes for detection of tuberculosis. *IEEE Sensors Journal* ISSN: 1530-437, (2014), 1-4.