**MARIE SKŁODOWSKA-CURIE INDIVIDUAL FELLOWSHIPS 2018**

**EXPRESSION OF INTEREST FOR HOSTING MARIE CURIE FELLOWS**

## HOST INSTITUTION

School of Sciences and Technology | UCIBIO Research Unit

## RESEARCH GROUP AND URL

Biomolecular Engineering Group
https://sites.fct.unl.pt/biomolecular_eng/

## SUPERVISOR (NAME AND E-MAIL)

Cecília Roque
cecilia.roque@fct.unl.pt

## SHORT CV OF THE SUPERVISOR

EDUCATION

- 2015 Habilitation in Bioengineering, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa (FCT-UNL);
- 1999-2004 PhD in Biotechnology, Instituto Superior Técnico, Universidade Técnica de Lisboa (IST);
- 1994-1999 BSc Hns (equivalent MEng) Chemical Engineering, Major in Biotechnology, IST, PT;

CURRENT POSITION(S)
2017- Associate Professor with Habilitation, Chemistry Dept., FCT-UNL, PT;
2007 – Principal Investigator, Biomolecular Engineering Lab. Chemistry Dept., FCT-UNL, PT;
2005 – 2016 Assistant Professor (Tenure in December 2010), Chemistry Dept., FCT-UNL, PT;

FELLOWSHIPS AND AWARDS
Since 2005 received several awards and distinctions, namely Gulbenkian Award to Young Scientists (2006), Scientific Merit Award UNL-Santander Totta (2010), SHIC´11 "First Honorable Mention" from Hovione (2011), ERC Starting Grant from the European Research Council (2014).

RESEARCH FUNDING
Since the start of my independent research group in 2007, I attracted national and international funding through competitive calls and awards in a total of 2.4 M€ in research projects (acting as principal investigator in 8 projects and as a team member in 4), and 1 M€ in research fellowships.

SCIENTIFIC PRODUCTION
To date, my research activities resulted in a total of 74 papers published in top international peer-reviewed journals in multidisciplinary fields (corresponding author in 50 manuscripts), which received 1400 citations. The results from my research group resulted in 64 publications and 2 patent applications. Our work receives enthusiastic feedback from the international community. As a result, I was invited for 60 oral presentations at international conferences and 6 invited lectures, 3 keynote lectures and 1 plenary lecture.

## SELECTED PUBLICATIONS


- Palma, SICJ, Traguedo AP, Porteira AR, Frias MJ, Gamboa H, Roque ACA. 2018. Machine learning for the meta-analyses of microbial pathogens' volatile signatures. Scientific Reports. 8:3360.

- Hussain, A, Semeano, ATS, Palma, SICJ, Pina, AS, Almeida, J, Medrado, BF, Pádua, ACCS, Carvalho, AL, Dionísio, M, Li, RWC, Gamboa, H, Ulijn, RV, GruberJ, Roque, ACA. 2017. Tunable gas sensor gels by cooperative assembly. Advanced Functional Materials, 1700803:1–9 (JOURNAL COVER).

- Batalha, IL, Zhou H, Lilley K, Lowe CR, Roque ACA. 2016. Mimicking nature: Phosphopeptide enrichment using combinatorial libraries of affinity ligands. Journal of Chromatography A. 1457:76–87.

- Fernandes, CSM, Barbosa I, Castro R, Pina AS, Coroadinha AS, Barbas A, Roque ACA. 2016. Retroviral particles are effectively purified on an affinity matrix containing peptides selected by phage-display. Biotechnology Journal. 11:1513–1524. (JOURNAL COVER).

- Palma, SICJ, Rodrigues, CAV, Carvalho, A, Morales PM, Freitas F, Fernandes AR, Cabral JS, Roque ACA. 2015. A value-added exopolysaccharide as a coating agent for MRI nanoprobes. Nanoscale. 7(34): 14272-14283.


## PROJECT TITLE AND DESCRIPTION

***Optoelectronic materials for non-invasive clinical diagnostics***

The research aim is to develop methods for the non-invasive detection of bacterial infections using novel optoelectronic devices.

The researcher is expected to:

- Possess experience in liquid crystals, materials science and optoelectronic devices;
- Have a good knowledge and experience in gas sensing and in optoelectronic devices.

## SCIENTIFIC AREA WHERE THE PROJECT FITS BEST

Chemistry (CHE) ● Physics (PHY)

## OTHER RELEVANT INFORMATION

Please check our work in the field of gas sensing - https://sites.fct.unl.pt/biomolecular_eng/pages/scent