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Filipa Grifo Ribeiro Trovão

Curriculum Vitae

Nationality: Portuguese

ORCID ID: 0000-0002-9995-4909

Researcher ID: O-3189-2015

E-mails: filipagrtrovao@gmail.com

f.trovao@campus.fct.unl.pt

Academic Degrees

- Sept 2014 - Nov 2016 **Master's Degree in Biochemistry**
Faculdade de Ciências e Tecnologias - Universidade Nova de Lisboa, Caparica (Portugal)
 - Average final grade: 17 (Scale: 0 to 20)
- Sept 2010 - Jul 2014 **Bachelor's Degree in Biochemistry**
Faculdade de Ciências e Tecnologias - Universidade Nova de Lisboa, Caparica (Portugal)
 - Average final grade: 14 (Scale: 0 to 20)

Current Research Position

- Feb 2018 - present **Research Fellow (MSc) at the Macromolecular Crystallography Group & GlycoLab - Functional Glycobiology** - Faculdade de Ciências e Tecnologias - Universidade Nova de Lisboa, Caparica (Portugal)
Project: "An integrative structural biology approach to characterise the protein-carbohydrate microbial recognition" (PTDC/BBB-BEP/0869/2014)
Supervisors: Dr Ana Luísa Carvalho, Dr Benedita Pinheiro, Dr Viviana Correia
 - Areas/Techniques involved:
Molecular Biology Techniques; Production and Purification of Carbohydrate binding proteins; Glycan Microarrays; Thermofluor; Protein Crystallography; Collection of X-ray Diffraction data at Synchrotron and Structure resolution; Protein-Ligand Interactions Techniques: MST (MicroScale Thermophoresis), ITC (Isothermal Titration Calorimetry) and Affinity gels.

Previous Research Positions/Experiences

- Feb 2017 - Jan 2018 **Research Fellow (MSc) at the Macromolecular Crystallography Group** - Faculdade de Ciências e Tecnologias - Universidade Nova de Lisboa, Caparica (Portugal)
Project: "ACTONP53: Targeting p53 family proteins: on the route to new anticancer agents" (P2020-PTDC/DTP-FTO/1981/2014)
Supervisors: Dr Ana Luísa Carvalho, Dr Benedita Pinheiro, Dr Ana Sara Gomes
 - Areas/Techniques involved:
Protein Crystallography; X-ray Diffraction data processing and Structure resolution; Protein-Ligand Interactions Techniques: MST (MicroScale Thermophoresis), ITC (Isothermal Titration Calorimetry), STD-NMR and Native-PAGE.
- Jul 2015 - Jul 2016 **Master's Dissertation Project in Biochemistry at the Biomolecular Engineering Lab** - Faculdade de Ciências e Tecnologias - Universidade Nova de Lisboa, Caparica (Portugal)
Thesis: Synthetic Affinity ligands for Human antibodies and its different approaches
Supervisor: Prof. Ana Cecília Roque; Co-supervisor: Dr. João Gonçalves (FF-UL)

- Areas/Techniques involved:

Combinatorial Chemistry; Solid-phase Synthesis; Downstream Processing; High-throughput screening procedures; Microscale Affinity Chromatography.

Jun 2016

Short Internship at Organic Chemistry Lab - Faculdade de Ciências e Tecnologias - Universidade Nova de Lisboa, Caparica (Portugal)

Project: Synthesis of Triazine ligand 22/8

Supervisor: Doctor Luísa Pinto Ferreira

- Areas/Techniques involved:

Chemical synthesis; Chromatographic and Spectrometric techniques.

Mar 2014 - Jun 2014

Bachelor's Final Project in Biochemistry at the Macromolecular Crystallography Group - Faculdade de Ciências e Tecnologias - Universidade Nova de Lisboa, Caparica (Portugal)

Thesis: HIV-2: Expression and Purification of a protein from viral envelope

Supervisor: Dr. Ana Luísa Carvalho; Co-supervisor: Dr. Benedita Pinheiro

- Areas/Techniques involved:

Molecular Biology techniques; Recombinant Protein Expression techniques (pET system); SDS-PAGE; Protein purification.

Publications

Santarsia S, Grosso AS, **Trovão F**, Jiménez-Barbero J, Carvalho AL, Nativi C, Marcelo F. 2018. Rational design of TF tumour-associated antigen mimetic targeting human galectin-3. [Manuscript submitted for Chemical Engineering Journal]

Trovão F, Gomes AS, Pinheiro BA, Freire F, Gomes S, Oliveira C, Domingues L., Romão MJ, Saraiva L, Carvalho AL. The crystal structure of the R280K mutant of human p53 explains the loss of DNA binding. *Int. J. Mol. Sci.* 2018 19(4), 1184; [Doi:10.3390/ijms19041184](https://doi.org/10.3390/ijms19041184)

Trovão F, Roque ACA. 2017/2018. A Novel Synthetic Affinity Ligand for Antibody Purification. [Manuscript in preparation]

Communications

Trovão F, Gomes AS, Pinheiro BA, Gomes S, Oliveira C, Domingues L., Romão MJ, Saraiva L, Carvalho AL. 2018. Structural evidence for the loss of DNA binding function of a relevant mutant of Human p53. 1st Meeting of Young Biophysicist. ITQB/NOVA, Oeiras, Portugal [Oral Communication]

Correia VG, Lourenço F, **Trovão F**, Brás JLA, Pinheiro BA, Silva LM, Feizi T, Fontes CMGA, Carvalho AL, Palma AS. 2018. A novel pectin binding protein from human gut microbiota. 7th National Meeting of Portuguese Users of Synchrotron Radiation (ENURS). FCT/NOVA, Caparica, Portugal [Poster]

Trovão F, Gomes AS, Pinheiro BA, Gomes S, Oliveira C, Domingues L., Romão MJ, Saraiva L, Carvalho AL. 2018. Crystal structure of Human p53 R280K mutant (DNA binding domain) - Explaining the loss of DNA binding. 7th National Meeting of Portuguese Users of Synchrotron Radiation (ENURS). FCT/NOVA, Caparica, Portugal [Oral Communication and Poster]

Trovão F, Carneiro BM. 2018. Cryo-electron microscopy and X-ray crystallography: complementary approaches to structural biology and drug discovery. Macromolecular Crystallography Meeting. FCT/NOVA, Caparica, Portugal [Oral Communication]

Trovão F, Gonçalves J, Roque ACA. 2016. A Novel Generation of Antibody Drug Conjugates (ADCs). Jornadas intercalares das Dissertações Anuais dos Mestrados dos Departamentos de Química e de Ciências da Vida, Caparica, Portugal. [Oral Communication]

Trovão F, Figueiredo C, Soares C, Ferreira MR., Laia CAT. 2015. Quenching Fluorescence Study of Tryptophan Amino Acids in the BSA protein. Final poster from “Biomolecular Spectroscopy” Curricular Unit, Caparica, Portugal. [Poster]

Supervision Experience

Oct - Dec 2017 Sabrina Santarsia from University of Florence (COST Action training) Protein Crystallization trials, under the project "TF tumour-associated antigen mimetic compound targeting human galectin-3".

Prizes and Awards

Jan 2018 Research fellowship (MSc) under the project “An integrative structural biology approach to characterise the protein-carbohydrate microbial recognition” (PTDC/BBB-BEP/0869/2014)

Jan 2017 Research fellowship (MSc) under the project “ACTONP53: Targeting p53 family proteins: on the route to new anticancer agents” (P2020-PTDC/DTP-FTO/1981/2014)

Jan 2015 Award for Best Poster entitled "Quenching Fluorescence Study of Tryptophan Amino Acids in the BSA protein" in Biomolecular Spectroscopy Curricular Unit Seminars

Other Relevant Activities

Workshop: Measuring binding affinities with NanoTemper Technologies (July 2018)
NanoTemper Technologies - Faculdade de Ciências e Tecnologias - Universidade Nova de Lisboa, Caparica (Portugal)

Workshop: Leadership for a better future (Jan 2018)
WORKS4U - *Workshops for Funding Applications & Career Development* - Faculdade de Ciências e Tecnologias - Universidade Nova de Lisboa, Caparica (Portugal)

Workshop: VCW (Value Creation Wheel) - Finding the best job for me (Nov 2017)
WORKS4U - *Workshops for Funding Applications & Career Development* - Faculdade de Ciências e Tecnologias - Universidade Nova de Lisboa, Caparica (Portugal)

Workshop: “How to write a good CV” (Feb 2017)
Workshops for Funding Applications & Career Development - Faculdade de Ciências e Tecnologias - Universidade Nova de Lisboa, Caparica (Portugal)

Volunteer at Expo FCT
Faculdade de Ciências e Tecnologias - Universidade Nova de Lisboa, Caparica (Portugal)

- General organization helper (2010/2011);
- Drugs detection and superabsorbent polymers activities (2013/2014);
- Biomolecular Engineering Lab Presentation (2015/2016);
- Protein Crystallography (2017/2018).

Biochemistry JORTEC (*Jornadas Tecnológicas*) Participant (2011 to 2016)
Faculdade de Ciências e Tecnologias - Universidade Nova de Lisboa, Caparica (Portugal)

Other Professional Experiences

- Feb 2013 - Aug 2014 **Bakery - Panizimbra.** Quinta do Conde, Sesimbra (Portugal)
- Customer Service.
- Mar 2010 - Apr 2010 **(Bizarro & Milho SA) Springfield - Cortefiel group.** Seixal (Portugal)
- Personalized Customer Service; Reposition; Cashier.