

# Curriculum vitae



**Mariana Fernandes Sequeira de Andrade**

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## EDUCATION

October 2022 – currently

### PhD in Biomedical Science

Scholarship BD/GHTM/DCB2022, FCT

Instituto de Higiene e Medicina Tropical, Universidade NOVA de Lisboa

October 2019 – February 2022

### Master in Biomedical Science

Instituto de Higiene e Medicina Tropical, Universidade NOVA de Lisboa

Final Master classification: 18/20.

Dissertation theme: “Study of the virulence potential of *Staphylococcus pseudintermedius* associated with skin and soft tissues infections in companion animals”, under supervision of Researcher Sofia Santos Costa and co-supervision of Professor Isabel Couto.

Dissertation classification: 19/20.

Developed skills: standard molecular biology and microbiology techniques; PCR; biofilm detection by the crystal violet adhesion method; *Galleria mellonella* infection model.

September 2016 – July 2019

### Biochemistry degree

Faculdade de Ciências e Tecnologias, Universidade NOVA de Lisboa

Final classification: 15/20.

Final Project theme: “Targeted mutagenesis and production optimization of a YhjA mutant of *Escherichia coli* – YhjA\_C59AC62A”, supervised by Professor Sofia Rocha Pauleta in Laboratory of Protein Biochemistry, Faculdade de Ciências e Tecnologias, Universidade NOVA de Lisboa.

Project classification:18/20.

Developed skills: targeted mutagenesis; protein production; protein purification.

September 2013 – June 2016

### High School

Escola Secundária de S. João do Estoril

Final classification: 16/20

## EXPERIENCE

March 2022 – September 2022

### Intership

Unit of Medical Microbiology, Instituto de Higiene e Medicina Tropical, Universidade NOVA de Lisboa

Theme: “Study of the virulence potential of staphylococci associated with infection in companion animals and humans”, supervised by Researcher Sofia Santos Costa.

Main objectives: Expand the *Galleria mellonella* infection model to assess the virulence of *Staphylococcus pseudintermedius*, *Staphylococcus aureus* and

*Staphylococcus coagulans*; and preparation of a manuscript for a peer-review journal.

July 2018

#### Internship

Laboratory of Microbiology and Genetics, Faculdade de Ciências e Tecnologias, Universidade NOVA de Lisboa

Theme: “Characterization of *Streptococcus* strains by PFGE”, supervised by Cínthia Barroco, PhD student.

Developed skills: Bacterial typing by PFGE (pulse-field gel electrophoresis)

## PARTICIPATION IN R&D PROJECTS

### DREBI - Exploring efflux inhibition to counteract antimicrobial resistance and biofilms in staphylococci

Team member

PI: Researcher Sofia Santos Costa; Co-PI: Researcher Sofia Santos Costa Professor Isabel Couto

Proponent Institution: Universidade NOVA de Lisboa, Instituto de Higiene e Medicina Tropical (Lisbon, Portugal)

Funding: Fundação para a Ciência e a Tecnologia (FCT, Portugal), 2022.07931.PTDC

### BIOSAFE - Preventing antimicrobial resistance in the community - the safe use of biocides

Team member

PI: Professor Isabel Couto; Co-PI: Researcher Sofia Santos Costa

Proponent Institution: Universidade NOVA de Lisboa, Instituto de Higiene e Medicina Tropical (Lisbon, Portugal)

Partner Institution: University of Lisbon, Faculty of Veterinary Medicine (Lisbon, Portugal)

Funding: Programa Operacional Factores de Competitividade – COMPETE (FEDER) and Fundação para a Ciência e a Tecnologia (FCT, Portugal), Ref. LISBOA-01-0145-FEDER-030713, PTDC/CAL-EST/30713/2017.

## ARTICLES IN INTERNATIONAL PEER-REVIEWED JOURNALS [2]

Morais C, Costa SS, Leal M, Ramos B, **Andrade M**, Ferreira C, Abrantes P, Pomba C and Couto I. Genetic diversity and antimicrobial resistance profiles of *Staphylococcus pseudintermedius* associated with skin and soft-tissue infections in companion animals in Lisbon, Portugal. *Front. Microbiol* **2023** – in press. <https://doi.org/10.3389/fmicb.2023.1167834>

**Andrade M**, Oliveira K, Morais C, Abrantes P, Pomba C, Rosato AE, Couto I, Costa SS. Virulence Potential of Biofilm-Producing *Staphylococcus pseudintermedius*, *Staphylococcus aureus* and *Staphylococcus coagulans* Causing Skin Infections in Companion Animals. *Antibiotics* **2022**, 11,1339. <https://doi.org/10.3390/antibiotics11101339>

## COMMUNICATIONS IN NACIONAL AND INTERNATIONAL CONGRESSES [9]

Rodrigues T, Marques J, **Andrade M**, Silveira H, Couto I, Costa SS. Implementation of the *Galleria mellonella* infection model at GHTM/IHMT-NOVA. Abstract accepted for oral communication at 6º Congresso Nacional de Medicina Tropical, 20-21 April, 2023, Lisbon.

Neves J, Antunes C, **Andrade M**, Couto I, Rodrigues L, Costa SS. Drug repurposing for identification of new efflux inhibitors and/or antibiofilm agents against *Staphylococcus aureus* and *Staphylococcus epidermidis*. Abstract accepted for poster presentation at 6º Congresso Nacional de Medicina Tropical, 20-21 April, 2023, Lisbon.

Morais C, Costa SS, Leal M, Ramos B, **Andrade M**, Ferreira C, Abrantes P, Pomba C, Couto I. High antimicrobial resistance and genetic diversity in *S. pseudintermedius* associated with skin and soft-tissue infections in companion animals in Lisbon, Portugal. Abstract accepted for poster presentation at 6<sup>o</sup> Congresso Nacional de Medicina Tropical, 20-21 April, 2023, Lisbon.

Neves J, Antunes C, **Andrade M**, Couto I, Rodrigues L, Costa SS. Drug repurposing for identification of new efflux inhibitors and/or antibiofilm agents against *Staphylococcus aureus* and *Staphylococcus epidermidis* (Abstract n. 04922). Abstract accepted for presentation at 33<sup>rd</sup> European Congress of Clinical Microbiology and Infectious Disease (ECCMID), 15-18 April, 2023, Copenhagen.

**Andrade M**, Oliveira K, Morais C, Abrantes P, Pomba C, Rosato AE, Couto I, Costa SS. Increased virulence potential of biofilm-producing coagulase-positive staphylococci associated with animal pyoderma (Abstract n. 3021). 32<sup>nd</sup> European Congress of Clinical Microbiology and Infectious Disease (ECCMID), 23-26 April, 2022, Lisbon/*webconference*.

**Andrade M**, Oliveira K, Morais C, Abrantes P, Pomba C, Rosato AE, Couto I, Costa SS. Increased virulence potential of biofilm-producing coagulase-positive staphylococci associated with animal pyoderma. 5<sup>th</sup> Annual Texas Medical Center AMR & Stewardship Conference, 19-21 January, 2022, *webconference*.

**Andrade M**, Morais C, Abrantes P, Pomba C, Couto I, Costa SS. Biofilm production by *Staphylococcus pseudintermedius* associated with animal pyoderma (Abstract n. 226). Congress of Microbiology and Biotechnology (MicroBiotec21), 23-26 November, 2021, *webconference*.

Morais C, Costa SS, **Andrade M**, Ramos B, Leal M, Abrantes P, Pomba C, Couto I. Molecular characterization of *Staphylococcus pseudintermedius* associated with skin and soft tissues infections in pets, Portugal (Abstract n. 365). Congress of Microbiology and Biotechnology (MicroBiotec21), 23-26 November, 2021, *webconference*.

Morais C, Costa SS, **Andrade M**, Ramos B, Leal M, Abrantes P, Pomba C, Couto I. Clonal lineages of *Staphylococcus pseudintermedius* associated with skin and soft tissues infections in pets, Portugal (Abstract n. 3395). European Congress of Clinical Microbiology and Infectious Disease (31<sup>st</sup> ECCMID), 9-12 July, 2021, *webconference*.

## PARTICIPATION IN ADVANCED TRAINING ACTIVITIES

September 12-15, 2022

**Summer School on Antimicrobial Resistance 2022**

Organization: BIOSAFE Project, Global Health and Tropical Medicine, Instituto de Higiene e Medicina Tropical, Universidade NOVA de Lisboa

Role: Participant

## PARTICIPATION IN SCIENTIFIC AND SCIENCE OUTREACH EVENTS

September 17, 2022

**Microorganism International Day**

Organization: Pavilhão do Conhecimento-Centro de Ciência Viva and Ciência Viva; Sociedade Portuguesa de Microbiologia

Role: Preparation of educational materials and participation in science exhibition

April 24, 2019

**EXPO FCT 2019**

Organization: Faculdade de Ciências e Tecnologias, Universidade NOVA de Lisboa.

Role: Participant as member of the Biochemistry department

February 2, 2018

**JORTEC Bioquímica 2018**

Organization: Biochemistry center, Faculdade de Ciências e Tecnologia da Universidade NOVA de Lisboa.

Role: Participant

## OTHER SKILLS

Fluent in Portuguese (writing and speaking – mother language)

Level B2 in English (writing, speaking and reading)

Expertise in informatic programs like Microsoft Word, Microsoft Excel and Microsoft PowerPoint

Basic notions of SPSS and GraphPad software

Experience in standard bioinformatic tools, including BLAST, CLUSTAL Omega and SnapGene Viewer

Basic expertise on BioRender, for scientific illustrations

## SOFT SKILLS

Organization

Teamwork

Resourcefulness

Creativity

April 2023