Sofia Santos Costa – Short *Curriculum vitae*

PERSONAL DATA

Name: Sofia Santos Costa (SS Costa, S Santos Costa)

Current position: Assistant Researcher (CEEC Institutional), Global Health and Tropical Medicine, GHTM, Associated Laboratory in Translation and Innovation Towards Global Health, LA-REAL, Instituto de Higiene e Medicina Tropical, IHMT, Universidade NOVA de Lisboa, NOVA.

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EDUCATION

2013. PhD in Biomedical Sciences, specialization Microbiology. Instituto de Higiene e Medicina Tropical, Universidade NOVA de Lisboa (IHMT-NOVA).

2008. MSc in Medical Microbiology. Universidade NOVA de Lisboa.

2005. Graduation in Applied Chemistry, branch Biotechnology. Faculdade de Ciências e Tecnologia, Universidade NOVA de Lisboa (FCT-NOVA).

CURRENT RESEARCH INTERESTS

Bacterial antimicrobial resistance (AMR) and virulence in a One Health context, namely:

- epidemiology and mechanisms of antibiotic and biocide resistance in staphylococci and other bacteria causing infections in humans and animals
- contribution of efflux systems and biofilms to antibiotic and biocide resistance
- evaluation of compounds as efflux inhibitors, antimicrobials and/or antibiofilm agents
- *Galleria mellonella* infection model to study virulence potential and drug efficacy

PARTICIPATION IN R&D PROJECTS

As PI: One exploratory project funded by FCT (Portugal), "DREBI – Exploring efflux inhibition to counteract antimicrobial resistance and biofilms in staphylococci" (ongoing since 2023), 49 999.92 €, http://doi.org/10.54499/2022.07931.PTDC.
As Co-PI: One project funded by FEDER/FCT (Portugal), "BIOSAFE – Preventing antimicrobial resistance in the community: the safe use of biocides" (2018 – 2022), 237 997.00€.
As a Team member: Participation in six R&D projects with national and international research teams.

PUBLICATIONS AND COMMUNICATIONS

ARTICLES IN SCIENTIFIC JOURNALS WITH "PEER-REVIEW" (n = 39) ***h index = 18*** *(scopus)*

SELECTED PUBLICATIONS FROM THE LAST 5 YEARS (total = 17)

- Garrine M, Andrade M, Neves J, Mandomando I, Couto I, **Costa SS**. Exploring the virulence potential of *Staphylococcus aureus* CC121 and CC152 lineages related to paediatric community-acquired bacteraemia in Manhiça, Mozambique. Scientific Reports. 2024;14:10758. doi: 10.1038/s41598-024-61345-3.
- Silva JM, Menezes J, Fernandes L, Marques C, **Costa SS**, Timofte D, *et al*.. Dynamics of *bla*OXA-23 gene transmission in *Acinetobacter* spp. from contaminated veterinary environmental surfaces: An emerging One Health threat? Journal of Hospital Infection. 2024; S0195-6701(24)00042-2. doi: 10.1016/j.jhin.2024.02.001. E-pub ahead of print
- Garrine M, **Costa SS**, Messa A Jr, Massora S, Vubil D, Ácacio S, *et al*.. Antimicrobial resistance and clonality of *Staphylococcus aureus* causing bacteraemia in children admitted to the Manhiça District Hospital, Mozambique, over two decades. Frontiers in Microbiology. 2023; 14: 1208131 doi: 10.3389/fmicb.2023.1208131.

- Leal M, Morais C, Ramos B, Pomba C, Abrantes P, **Costa SS**, *et al*. Exploring efflux as a mechanism of reduced susceptibility towards biocides and fluoroquinolones in *Staphylococcus pseudintermedius*. Animals. 2023; 13: 1270. doi: 10.3390/ani13071270.
- Morais C, **Costa SS**, Leal M, Ramos B, Andrade M, Ferreira C, *et al*. Genetic diversity and antimicrobial resistance profiles of *Staphylococcus pseudintermedius* associated with skin and soft-tissue infections in companion animals in Lisbon, Portugal. Frontiers in Microbiology. 2023; 14:1167834. doi: 10.3389/fmicb.2023.1167834.
- Garrine M, Quintó L, **Costa SS**, Messa A Jr, Massinga AJ, Vubil D, *et al*. Epidemiology and clinical presentation of community-acquired *Staphylococcus aureus* bacteraemia in children under 5 years of age admitted to the Manhiça District Hospital, Mozambique, 2001-2019. European Journal of Clinical Microbiology and Infectious Diseases. 2023; 42: 653-9. doi: 10.1007/s10096-023-04580-2.
- Ferreira C, Abrantes P, **Costa SS**, Viveiros M, Couto I. Occurrence and variability of the efflux pump gene *norA* across the *Staphylococcus* genus. International Journal Molecular Sciences. 2022, 23(23), 15306. doi: 10.3390/ijms232315306
- 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. doi: 10.3390/antibiotics11101339
- **Costa SS**, Ribeiro R, Serrano M, Oliveira K, Ferreira C, Leal M, *et al*. *Staphylococcus aureus* causing skin and soft tissue infections in companion animals: antimicrobial resistance profiles and clonal lineages. Antibiotics 2022, 11, 599. doi.org/ 10.3390/antibiotics11050599
- **Costa SS***, Oliveira V, Serrano M, Pomba C, Couto I*. Phenotypic and molecular traits of *Staphylococcus coagulans* associated with canine skin infections in Portugal. Antibiotics 2021, 10(5), 518. doi.org/10.3390/antibiotics10050518
- Ferreira C, **Costa SS**, Serrano M, Oliveira K, Trigueiro G, Pomba C, *et al*. Clonal lineages, antimicrobial resistance and PVL carriage of *Staphylococcus aureus* associated to skin and soft tissue infections from ambulatory patients in Portugal. Antibiotics 2021, 10:345. doi.org/10.3390/antibiotics10040345
- **Costa SS**, Ferreira C, Ribeiro R, Feßler AT, Schink A-K, Kadlec K, *et al*. Proposal of epidemiological cut-off values for apramycin 15 µg and florfenicol 30 µg disks applicable to *Staphylococcus aureus*. Microbial Drug Resistance 2021; 27:1555-1559. doi: 10.1089/mdr.2020.0402
- **Costa SS,** Sobkowiak B, Parreira R, Edgeworth JD, Viveiros M, Clark TG, *et al*. Genetic diversity of *norA*, coding for a main efflux pump of *Staphylococcus aureus*. Front Genet. 2019; 9: 710. doi: 10.3389/fgene.2018.00710

COMMUNICATIONS IN SCIENTIFIC MEETINGS (as author and co-author)

Oral communications: 25 in national (16) and international (9) scientific meetings
Poster presentations: 111 poster communications in national (61) and international (50) meetings

EXPERIENCE AS SCIENTIFIC ADVISER

PhD students: 1 concluded (as co-supervisor); 7 ongoing (2 as supervisor, 5 as co-supervisor)
MSc students: 22 concluded (7 as supervisor, 15 as co-supervisor); 8 ongoing (2 as supervisor, 6 as co-supervisor)
BSc student: 1 concluded supervision
Erasmus student: 1 concluded co-supervision

TEACHING EXPERIENCE

PhD Program in Biomedical Sciences (IHMT-NOVA): participation in one Curricular Unit (CU) since 2016
PhD Program in Tropical Diseases and Global Health (IHMT-NOVA): participation in one CU in 2019/2020; 2020/2021
Master Program in Medical Microbiology (NOVA): participation in four CUs since 2008
Master Program Biomedical Sciences (IHMT-NOVA): participation in two CUs since 2012

PARTICIPATION IN INSTITUTIONAL MANAGEMENT BODIES

- Elected member of the Scientific Council of IHMT-NOVA [2020 - present]
- Elected member of the Pedagogic Council of IHMT-NOVA [2010-2012]

Lisbon, 25th September 2024