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CURRENT POSITION: Assistant Professor, Unit of Medical Microbiology, Instituto Higiene e Medicina Tropical, Universidade Nova de Lisboa (IHMT, UNL), Lisbon, Portugal.

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HIGHEST DEGREE:
Ph.D., Biology - Molecular Biology, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa (1997).

AREA OF SCIENTIFIC ACTIVITY
. Characterization of antibiotic and biocide resistance mechanisms in staphylococci.
. Efflux driven antimicrobial resistance in bacteria.
. Molecular detection of pathogenic bacteria, including drug resistant staphylococci and mycobacteria.

PARTICIPATION IN R&D PROJECTS
- **As coordinator:** 4 funded projects, 1 as co-PI
- **As team member:** Participated in over 20 R&D projects with both national and international research teams.

· **ResearcherID:** I-2640-2012
· **Scopus Author ID:** 55916738200
· **ORCID iD:** 0000-0003-3536-2733

PEER-REVIEWED PUBLICATIONS
- Author of **90** papers in international journals with peer-review *(total WoK citacions:* 2,500; *h-index:* ***29****)*
- Author of **14** book chapters (9 international, 5 national editions)

SELECTED PUBLICATIONS FROM THE LAST 5 YEARS

Costa SS, Viveiros M, Pomba C, **Couto I** (2018). Active antimicrobial efflux in *Staphylococcus epidermidis*: building up of resistance to fluoroquinolones and biocides in a major opportunistic pathogen. J Antimicrob Chemother. 73: 320–324. doi: 10.1093/jac/dkx400.

Machado D, Coelho TS, Perdigão J, Pereira C, **Couto I**, Portugal I, Maschmann RDA, Ramos DF, von Groll A, Rossetti MLR, Silva PA and Viveiros M (2017). Interplay between Mutations and Efflux in Drug Resistant Clinical Isolates of *Mycobacterium tuberculosis*. Front. Microbiol. 8:711. doi: 10.3389/fmicb.2017.00711

Perdigão J, Clemente S, Ramos J, Masakidi P, Machado D, Silva C, **Couto I**, Viveiros M, Taveira N, Portugal I (2017) Genetic diversity, transmission dynamics and drug resistance of *Mycobacterium tuberculosis* in Angola. Sci Rep. 2017;7:42814. doi: 10.1038/srep42814

Costa SS, Palma C, Kadlec K, Fessler AT, Viveiros M, Melo-Cristino J, Schwarz S, **Couto I** (2016). Plasmid-Borne Antimicrobial Resistance of Staphylococcus aureus Isolated in a Hospital in Lisbon, Portugal. Microb Drug Resist. Microb Drug Resist. 22(8):617-626. doi: 10.1089/mdr.2015.0352

Costa SS, Lopes E, Azzali E, Machado D, Coelho T, da Silva PEA, Viveiros M, Pieroni M, **Couto I.** (2016) An Experimental Model for the Rapid Screening of Compounds with Potential Use Against Mycobacteria. ASSAY and Drug Development Technologies. 2016, 14(9): 524-534. doi:10.1089/adt.2016.752

Machado D, D Pires, J Perdigão, **I Couto**, I Portugal, M Martins, L Amaral, E Anes, M Viveiros (2016). Ion Channel Blockers as Antimicrobial Agents, Efflux Inhibitors, and Enhancers of Macrophage Killing Activity against Drug Resistant *Mycobacterium tuberculosis*. PLoS One. 26;11(2):e0149326. doi: 10.1371/journal.pone.0149326

PEA da Silva, D Machado, D Ramos, **I Couto**, A Von Groll, and M Viveiros. "Efflux Pumps in Mycobacteria: Antimicrobial Resistance, Physiological Functions, and Role in Pathogenicity". In: X.-Z. Li (ed.), Efflux-Mediated Antimicrobial Resistance in Bacteria. Springer International Publishing Switzerland. 2016. Pages: 527-559. doi: 10.1007/978-3-319-39658-3_21. ISBN 978-3-319-39658-3.

Simões AS, **I Couto**, C Toscano, E Gonçalves, P Póvoa, M Viveiros, LV Lapão (2016) Prevention and Control of Antimicrobial Resistant Healthcare-Associated Infections: The Microbiology Laboratory Rocks! Front Microbiol. 7:855. doi: 10.3389/fmicb.2016.00855.

Costa SS, Viveiros M, Rosato AE, Melo-Cristino J, **Couto I** (2015). Impact of efflux in the development of multidrug resistance phenotypes in *Staphylococcus aureus*. BMC Microbiology, 15:232. doi: 10.1186/s12866-015-0572-8

Machado D, R Cannalire, SS Costa, G Manfroni, O Tabarrini, V Cecchetti, **I Couto**, M Viveiros, S Sabatini (2015) The boosting effect of 2-phenylquinoline efflux inhibitors in combination with macrolides against *Mycobacterium smegmatis* and *Mycobacterium avium*. ACS Infect. Dis. Article doi: 10.1021/acsinfecdis.5b00052

Pieroni M, D Machado, E Azzali, SS Costa, **I Couto**, G Costantino, M Viveiros (2015). Rational design and synthesis of thioridazine analogues as enhancers of the antituberculosis therapy. J Med Chem. 58(15):5842-53. doi: 10.1021/acs.jmedchem.5b00428.

Rabna P, J Ramos, G Ponce, L Sanca, M Mane, A Armada, D Machado, F Vieira, VF Gomes, E Martins, R Colombatti, F Riccardi, J Perdigão, J Sotero, I Portugal, **I Couto**, J Atouguia, A Rodrigues, M Viveiros (2015). Direct detection by the Xpert MTB/RIF assay and characterization of multi and poly drug-resistant tuberculosis in Guinea-Bissau, West Africa. PLoS ONE, 27;10(5):e0127536. doi: 10.1371/journal.pone.0127536.

Coelho T, D Machado, **I Couto**, R Maschmann, D Ramos, A von Groll, ML Rossetti, PA Silva, M Viveiros (2015). Enhancement of antibiotic activity by efflux inhibitors against multidrug resistant *Mycobacterium tuberculosis* clinical isolates from Brazil. Front.Microbiol. 6:330. doi: 10.3389/fmicb.2015.00330

Perdigão J, H Silva, D Machado, R Macedo, F Maltez, C Silva, L Jordao, **I Couto**, K Mallard, F Coll,G A Hill-Cawthorne, R McNerney, A Pain, T G Clark, M Viveiros, I Portugal (2014) Unraveling *Mycobacterium tuberculosis* genomic diversity and evolution in Lisbon, Portugal, a highly drug resistant setting. BMC Genomics. 18;15:991. doi: 10.1186/1471-2164-15-991.

Leão C, Canto A, Machado D, Sanches IS, **Couto I**, Viveiros M, Inácio J, Botelho A (2014). Relatedness of *Mycobacterium avium* subspecies *hominissuis* clinical isolates of human and porcine origins assessed by MLVA. Vet Microbiol.173(1-2):92-100.

Couto N, Belas A, **Couto I**, Perreten V, Pomba C (2014). Genetic relatedness, antimicrobial and biocide susceptibility comparative analysis of methicillin-resistant and -susceptible *Staphylococcus pseudintermedius* from Portugal. Microb Drug Resist.20(4):364-71. doi: 10.1089/mdr.2013.0043.

Perdigão J, Macedo R, Machado D, Silva C, Jordão L, **Couto I**, Viveiros M, Portugal I (2014). GidB mutation as a phylogenetic marker for Q1 cluster *Mycobacterium tuberculosis* isolates and intermediate-level streptomycin resistance determinant in Lisbon, Portugal. Clin Microbiol Infect. 20(5):O278-84.

Pedrosa P, Veigas B, Machado D, **Couto I**, Viveiros M, Baptista PV. (2014) Gold nanoprobes for multi loci assessment of multi-drug resistant tuberculosis. Tuberculosis. 94(3):332-7.

Machado D, J Perdigão, J Ramos, **I Couto**, I Portugal, C Ritter, E Bottger, M Viveiros (2013). High level resistance to isoniazid and ethionamide in multidrug resistant *Mycobacterium tuberculosis* of the Lisboa family is associated with *inhA* double mutations. J Antimicrob Chemother. 68(8):1728-32.

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