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DATE OF BIRTH: 18th October 1966
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## ACADEMIC QUALIFICATIONS :

1991 Degree in Biology from Faculdade de Ciências da Universidade de Lisboa (FC/UL)

1995 Master of Science in Biotechnology (Biochemical Engineering) from Instituto Superior Técnico da Universidade Técnica de Lisboa (IST/UTL)

2001 PhD in Biology (Microbial Genetics) from Faculdade de Ciências da Universidade de Lisboa

2012 Habilitation in Biomedical Sciences (Speciality Microbiology) - (Agregação em Ciências Biomédicas – Especialidade Microbiologia) from Instituto de Higiene e Medicina Tropical/ Universidade Nova de Lisboa.

## APPOINTMENTS AND WORKING ACHIEVEMENTS:

**Oct/1991 - Sep/1992** - Research training in Virology ; Supervision: Profª Wanda Canas-Ferreira; Laboratory: Departamento de Microbiologia do Instituto de Higiene e Medicina Tropical da Universidade Nova de Lisboa (IHMT/UNL); Subject: "Cell culture for HIV-2 isolation from Guinea-Bissau "
Lecturing Post-Graduation Course in Tropical Medical Microbiology.

**Oct/1992 - Apr/1995** - Master of Science Course in Biotechnology (Biochemical Engineering) from IST/UTL and research activity in Molecular Genetics/Biotechnology with a Scholarship from Junta Nacional de Investigação Científica e Tecnológica (J.N.I.C.T./F.C.T.); Supervision: Profª Doutora Isabel Sá-Correia (IST/UTL) and Prof Dr. Hugo Ayres David (Institut Pasteur Paris); Laboratory: Microbiologia IHMT/UNL; Thesis: "Carotenogenesis in Mycobacterium vaccae - Genetic and biochemical characterization"

**Apr/1995 – Mar/2001** - PhD Scholarship from J.N.I.C.T./F.C.T.; Supervision: Prof Dr. Hugo Ayres David (Institut Pasteur Paris and IHMT/UNL) and Prof. Dr. Filomena Exposto (IHMT/UNL); Laboratory: Microbiologia of IHMT/UNL.; Thesis: "Isolation of the carotenogenesis operon in Mycobacterium vaccae. - Application to the development of new mycobacterial genetic tools and to the understanding of molecular mechanism of tuberculosis pathogeny"

**Jan/1998 – Mar/2001** - Lecturer (Assistente) in Medical Microbiology/Bacteriology in the Unit of Mycobacteriology of the IHMT/UNL. Lecturing activities in the Post-Graduation Course in Tropical Medical Microbiology and in the Faculty of Medical Sciences (Universidade Nova de Lisboa) – Microbiology and Parasitology -Third year of the Medical Degree Course. Research activities in Molecular Genetics of Mycobacteria, mycobacteria diagnosis and drug resistance.

**Mar/2001 –Dec2009** - Assistant Professor (Professor Auxiliar) in Medical Microbiology/Bacteriology in the Unit of Mycobacteriology of the IHMT/UNL . Lecturing activities in the Masters Course (MSc) in Medical Microbiology from theIHMT/UNL; MSc Coordinator since 2003. Deputy Director of the Tuberculosis and Mycobacteria Clinical Laboratory. Research activities in Molecular Genetics of Mycobacteria and Bacteria, mycobacteria diagnosis, drug resistance and development of new drugs.

**Dec2009 - April 2012 –** Associate Professor (Professor Associado) in Medical Microbiology/Bacteriology in the Unit of Medical Microbiology (Group of Mycobacteriology) of the IHMT/UNL

**April 2012 to July 2013 -** Associate Professor with Habilitation in Biomedical Sciences (Speciality Microbiology) (Professor Associado com Agregação em Ciências Biomédicas – Especialidade Microbiologia) in the Unit of Medical Microbiology (Group of Mycobacteriology) of the IHMT/UNL. Thesis: "As novas tecnologias de biologia molecular no diagnóstico precoce da tuberculose resistente: a sua integração e monitorização no contexto dos programas de controlo da tuberculose - The new molecular biology technologies in the early diagnosis of drug-resistant tuberculosis: its integration and monitoring in the context of TB control programs".

**July 2013 to date -** Full Professor in Medical Microbiology (Professor Catedrático em Microbiologia Médica) in the Unit of Medical Microbiology (Group of Mycobacteriology) of the IHMT/UNL.

**January 2010 to date –** President of the Pedagogical Council of the IHMT/UNL.

**October 2014 – October 2017 –** Special Visiting Professor at Faculdade de Medicina da Universidade do Rio de Janeiro (Brasil). Ref _ CAPES218488

**Teaching Activity (coordination and/or teaching):**
Mestrado (2º Ciclo) em Microbiologia Médica da Universidade Nova de Lisboa (UNL) – MSc in Medical Microbiology of UNL. Curricular Unit of Medical Bacteriology and Curricular Unit of Tuberculosis and other Mycobacteriosis;
Mestrado (2º Ciclo) em Ciências Biomédicas (IHMT/UNL) – MSc in Biomedical Sciences of IHMT/UNL. Curricular Unit of Medical Microbiology;
Mestrado (2º Ciclo) em Saúde Tropical (IHMT/UNL) – MSc in Tropical Health. Lectures on Laboratory Diagnosis of Tuberculosis and Curricular Unit of Tuberculosis and other Mycobacteriosis;
Mestrado (2º Ciclo) em Saúde e Desenvolvimento (IHMT/UNL) – MSc in Health and Development. Lectures on Design of TB-Control programs;
Doutoramento (3º Ciclo) em Ciências Biomédicas (IHMT/UNL). PhD in Biomedical Sciences - Curricular Unit of Medical Microbiology and Curricular Unit of Tuberculosis and other Mycobacteriosis;
Doutoramento (3ºCiclo) em Genética Humana e Doenças Infeciosas (IHMT/UNL) – PhD in Human Genetics and Infection. Curricular Unit of Medical Microbiology and Mycology.

**Area of scientific activity:** Scientific activity devoted to the early diagnosis of active or latent tuberculosis (TB) infections as well as the development of new therapeutical approaches to deal with MDRTB and with other drug resistant bacterial infections. Also interested in molecular biology of mycobacteria and immunology of TB. Executive Co-ordinator of the Masters in Medical Microbiology of the UNL. As Deputy-Director of the TB Laboratory of the IHMT (since 2001) has contributed to the resolution of the pulmonary TB problem of Lisbon by the generation of complete reports within a period of 15 to 20 days for 10 Hospitals of the TB Task Force of Lisbon. Over 100 studies published in peer review national and international journals in mycobacteriology, bacteriology, and resistance to antibiotics, microbial genetics, molecular epidemiology and immunology.

**Domain of specializations:** Medical Microbiology, bacteriology, mycobacteriology, laboratory diagnosis of mycobacterial infections, molecular biology and genetics of Mycobacterium sp. Tuberculosis. Molecular typing of multidrug-resistant *Mycobacterium tuberculosis*. Mechanisms and strategies to circumvent drug resistance in mycobacteria, composition of the mycobacterial cell wall/envelope in relation to drug resistance, new antibiotics, antibiotic uptake, efflux-pumps, drug targeting and molecular vectorisation, nanotechnology, flow-cytometry.

**Present research interests:** Research in tuberculosis and antibiotic resistant infections in support for alternative therapies of incurable diseases such as multidrug resistant tuberculosis and methicillin-vancomycin resistant staphylococcal infections. Immunology of tuberculosis. Strong interests in assisting Portuguese speaking countries of Africa in combating tuberculosis. Expertise in the laboratory diagnosis of tuberculosis infections.

**Research funding :** Principal Investigator/Team Leader of 8 research projects (and member the team of 12 other research projects). Funding Agencies: Fundação para a Ciência e a Tecnologia, Ministério da Educação e Ciência, Fundação Calouste Gulbenkian, Ministério da Saúde, Conselho de Reitores das Universidades Portuguesas (Portugal), European Union.

**Refereeing activities :** Member of the evaluation panel of Individual Doctoral and Post-doctoral Grant proposals - area Biomedical Sciences and Basic Medicine -2013-2015 -Fundação para a Ciência e a Tecnologia – Ministério da Educação e Ciência de Portugal. Expert Evaluator for the "MRC South Africa 2013- 2014" calls (area Tuberculosis). Member of the Review and Advisory Panel of the 'Wellcome Trust Awards 2014". Ad-hoc reviewer for the expert panel of the The Research Foundation – Flanders (FWO), Belgium. Member of the evaluation panels for the QREN R&D investment proposals of the Ministério da Economia de Portugal. Consultant of the Ministério da Saúde de Portugal (Área Tuberculosis). Regular ad-hoc reviewer of several international journal manuscripts (JAC, AAC, PlosOne, IJAA, Tuberculosis, BMC Microbiology, etc) .

**Academic and Science Management activities:**
2010 – present - President of the Pedagogical Council of the IHMT/UNL.
2005 – present - Elected member and Vice-President of the General Council of the IHMT/UNL.
2009 - present - Elected member of the Scientific Council of the IHMT/UNL.
2006 - 2014 – Member of the Directive Committee of the Portuguese Board of Biologists (Ordem dos Biólogos)
2010 - 2014 - Founding member and Treasurer of the European Society of Clinical Microbiology and Infectious Diseases (ESCMID) Study Group for Mycobacterial Infections (ESGMYC).
https://www.escmid.org/index.php?id=897
Elected Vice-chair of the Gordon Research Conference - Multi-Drug Efflux Systems - 2017-2019

## BIBLIOMETRICS:

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|---|---|
| **ISI - Web of Knowledge analysis:** | Total Articles in Publication List: 128; Articles With Citation Data: 112;<br>Sum of the Times Cited: 2241; Average Citations per Article: 20.01<br>**h-index: 30**<br>ResearcherID: A-7326-2008<br>URL: http://www.researcherid.com/rid/A-7326-2008 |
| **Scopus analysis:** | Total Articles in Publication List: 125<br>Sum of the Times Cited: 2700<br>**h-index: 32**<br>Scopus Affiliation : 7003949212<br>URL : http://www.scopus.com/authid/detail.url?authorId=7003949212 |
| **Google Scholar webpage:** | Total citations: 3625<br>**h-index: 37**<br>URL : http://scholar.google.pt/citations?user=o39byr4AAAAJ&hl=en |
| **ORCID ID** : | URL : http://orcid.org/0000-0001-9676-6251 |

## PUBLICATIONS IN INTERNATIONAL PEER-REVIEW JOURNALS (N = 123):

1. Dalla Costa ER, Vasconcelos SE, Esteves LS, Gomes HM, Gomes LL, Almeida da Silva P, Perdigão J, Portugal I, Viveiros M, McNerney R, Pain A, Clark TG, Rastogi N, Unis G, Rossetti ML, Suffys PN. Multidrug resistant Mycobacterium tuberculosis of the Latin American Mediteranean lineage wrongly identified as Mycobacterium pinnipedii (ST863) causing active tuberculosis in south Brazil. J Clin Microbiol. 2015 Sep 23. pii: JCM.02012-15.
http://www.ncbi.nlm.nih.gov/pubmed/26400784

2. Pieroni M, Machado D, Azzali E, Santos Costa S, Couto I, Costantino G, **Viveiros M**. Rational Design and Synthesis of Thioridazine Analogues as Enhancers of the Antituberculosis Therapy. *J Med Chem*. 2015 Aug 13;58(15):5842-53. doi: 10.1021/acs.jmedchem.5b00428.
http://pubs.acs.org/doi/abs/10.1021/acs.jmedchem.5b00428

3. Coll F, McNerney R, Preston MD, Guerra-Assunção JA, Warry A, Hill-Cawthorne G, Mallard K, Nair M, Miranda A, Alves A, Perdigão J, **Viveiros M**, Portugal I, Hasan Z, Hasan R, Glynn JR, Martin N, Pain A, Clark TG. Rapid determination of anti-tuberculosis drug resistance from whole-genome sequences. *Genome Med*. 2015 May 27;7(1):51. doi: 10.1186/s13073-015-0164-0.
http://www.genomemedicine.com/content/7/1/51

4. Rabna P, Ramos J, Ponce G, Sanca L, Mané M, Armada A, Machado D, Vieira F, Gomes VF, Martins E, Colombatti R, Riccardi F, Perdigão J, Sotero J, Portugal I, Couto I, Atouguia J, Rodrigues A**, Viveiros M**. Direct Detection by the Xpert MTB/RIF Assay and Characterization of Multi and Poly Drug-Resistant Tuberculosis in Guinea-Bissau, West Africa. *PLoS One*. 2015 May 27;10(5):e0127536. doi: 10.1371/journal.pone.0127536.
http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0127536

5. Coelho T., Machado D., Couto I., Maschmann R., Ramos D., Von_groll A, Rossetti ML, Silva PA, **Viveiros M**. Enhancement of antibiotic activity by efflux inhibitors against multidrug resistant *Mycobacterium tuberculosis* clinical isolates from Brazil. *Frontiers in Microbiology*, 2015. 6:330
http://journal.frontiersin.org/article/10.3389/fmicb.2015.00330/abstract

6. Cabral V, Luo X, Junqueira E, Costa SS., Mulhovo S, Duarte A, Couto I, Viveiros M, Ferreira MJU. Enhancing activity of antibiotics against *Staphylococcus aureus* by *Zanthoxylum capense* constituents and derivatives. *Phytomedicine* . 2015. 22:4, 469-476
http://www.sciencedirect.com/science/article/pii/S0944711315000495#

7. Cambau E, **Viveiros M**, Machado D, Raskine L, Ritter C, Tortoli E, Matthys V, Hoffner S, Richter E, Perez Del Molino ML, Cirillo DM, van Soolingen D, Böttger EC. Revisiting susceptibility testing in MDR-TB by a standardized quantitative phenotypic assessment in a European multicentre study. *J Antimicrob Chemother*. 2015 Mar;70(3):686-96. doi: 10.1093/jac/dku438.
http://jac.oxfordjournals.org/content/early/2014/11/11/jac.dku438.short

8. Rodrigues L, **Viveiros M**, Aínsa JA. Measuring efflux and permeability in mycobacteria. *Methods Mol Biol*. 2015;1285:227-39. doi: 10.1007/978-1-4939-2450-9_13.
http://link.springer.com/protocol/10.1007%2F978-1-4939-2450-9_13

9. Costa P, Couto I, **Viveiros M**, Inácio J. Nested and multiplex real-time PCR using dual-labeled probes: detecting and discriminating *Mycobacterium tuberculosis* complex members in cultures and animal tissues. *Methods Mol Biol.* 2015;1247:133-43. doi: 10.1007/978-1-4939-2004-4_9.
http://link.springer.com/protocol/10.1007/978-1-4939-2004-4_9#page-1

10. Costa P, Botelho A, Couto I, **Viveiros M**, Inácio J. Standing of nucleic acid testing strategies in veterinary diagnosis laboratories to uncover *Mycobacterium tuberculosis* complex members. *Front. Mol. Biosci*., 2014 Oct 15; 1:16. doi: 10.3389/fmolb.2014.00016.
http://journal.frontiersin.org/Journal/10.3389/fmolb.2014.00016/full

11. Costa P, Amaro A, Ferreira AS, Machado D, Albuquerque T, Couto I, Botelho A, **Viveiros M**, Inácio J. Rapid identification of veterinary-relevant complex species using 16S rDNA, IS6110 and Regions of Difference-targeted dual-labelled hydrolysis probes. *J Microbiol Methods*. 2014 Sep 2;107C:13-22. doi: 10.1016/j.mimet.2014.08.017.
http://www.sciencedirect.com/science/article/pii/S0167701214002516

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

13. Leão C, Canto A, Machado D, Sanches IS, Couto I, **Viveiros M**, Inácio J, Botelho A. Relatedness of *Mycobacterium avium* subspecies *hominissuis* clinical isolates of human and porcine origins assessed by MLVA. *Vet Microbiol*. 2014 Sep 17;173(1-2):92-100. doi: 10.1016/j.vetmic.2014.06.027.
http://www.sciencedirect.com/science/article/pii/S0378113514003198

14. Coll F, McNerney R, Guerra-Assunção JA, Glynn JR, Perdigão J, **Viveiros M**, Portugal I, Pain A, Martin N, Clark TG. A robust SNP barcode for typing *Mycobacterium tuberculosis* complex strains. *Nature Communications*. 2014 Sep 1;5:4812. doi:10.1038/ncomms5812.
http://www.nature.com/ncomms/2014/140901/ncomms5812/full/ncomms5812.html

15. Martins F, Santos S, Ventura C, Elvas-Leitão R, Santos L, Vitorino S, Reis M, Miranda V, Correia HF, Aires-de-Sousa J, Kovalishyn V, Latino DA, Ramos J, **Viveiros M**. Design, synthesis and biological evaluation of novel isoniazid derivatives with potent antitubercular activity. *Eur J Med Chem*. 2014 Jun 23;81:119-38. doi: 10.1016/j.ejmech.2014.04.077.
http://www.sciencedirect.com/science/article/pii/S0223523414004061

16. Perdigão J, Macedo R, Machado D, Silva C, Jordão L, Couto I, **Viveiros M**, Portugal I. GidB mutation as a phylogenetic marker for Q1 cluster *Mycobacterium tuberculosis* isolates and intermediate-level streptomycin resistance determinant in Lisbon, Portugal. *Clin Microbiol Infect*. 2014 May;20(5):O278-84. doi: 10.1111/1469-0691.12392. doi: 10.1111/1469-0691.12392.
http://onlinelibrary.wiley.com/doi/10.1111/1469-0691.12392/pdf

17. Coll F, Preston M, Guerra-Assunção JF, Hill-Cawthorn G, Harris D, Perdigão J, **Viveiros M**, Portugal I, Drobniewski F, Gagneux S, Glynn JR, Pain A, Parkhill J, McNerney R, Martin N, Clark TG. PolyTB: A genomic variation map for *Mycobacterium tuberculosis. Tuberculosis*. 2014 May;94(3):346-54. doi: 10.1016/j.tube.2014.02.005.
http://www.sciencedirect.com/science/article/pii/S1472979214203428

18. Pedrosa P, Veigas B, Machado D, Couto I, **Viveiros M**, Baptista PV. Gold nanoprobes for multi loci assessment of multi-drug resistant tuberculosis. *Tuberculosis*. 2014 May;94(3):332-7. doi: 10.1016/j.tube.2013.12.009.
http://www.sciencedirect.com/science/article/pii/S147297921400002X

19. **Viveiros M**, Pieroni M Spectinamides: a challenge, a proof, and a suggestion. *Trends in Microbiology*. 2014 Apr;22(4):170-1. doi: 10.1016/j.tim.2014.02.008.
http://www.sciencedirect.com/science/article/pii/S0966842X14000420

20. Machado D, Ramos J, Couto I, Cadir N, Narciso I, Coelho E, Viegas S, **Viveiros M**. Assessment of the BD MGIT TBc Identification Test for the Detection of *Mycobacterium tuberculosis* Complex in a Network of Mycobacteriology Laboratories. *BioMed Research International*, 2014;2014:398108. doi: 10.1155/2014/398108. http://www.hindawi.com/journals/bmri/2014/398108/abs/

21. Martins F, Ventura C, Santos S, **Viveiros M**. QSAR Based Design of New Antitubercular Compounds: Improved Isoniazi Derivatives Against Multidrug-Resistant TB. *Curr Pharm Des*. 2014;20(27):4427-54. doi: 10.2174/13816128196661311181644 34 http://www.eurekaselect.com/118061/article

22. de Carvalho CC, Costa SS, Fernandes P, Couto I, **Viveiros M**. Membrane transport systems and the biodegradation potential and pathogenicity of genus *Rhodococcus*. *Front Physiol*. 2014 Apr 4; 5:133. doi: 10.3389/fphys.2014.00133. http://journal.frontiersin.org/Journal/10.3389/fphys.2014.00133/abstract

23. Veigas B, Pedrosa P, Couto I, **Viveiros M**, Baptista PV. Isothermal DNA amplification coupled to Au-nanoprobes for detection of mutations associated to Rifampicin resistance in *Mycobacterium tuberculosis*. *J Nanobiotechnology*. 2013 Nov 25;11:38. doi: 10.1186/1477-3155-11-38. doi: 10.1186/1477-3155-11-38. http://www.jnanobiotechnology.com/content/11/1/38

24. Armada AM, Alexandru T, Machado D, Danko B, Hunyadi A, Dinache A, Nastasa V, Boni M, Ramos J, **Viveiros M**, Molnar J, Pascu ML, Amaral L. The In Vitro Activity of Products Formed from Exposure of Chlorpromazine to a 266nm LASER Beam Against Species of Mycobacteria of Human Interest. *In Vivo*. 2013 Sep-Oct;27(5):605-10. http://iv.iiarjournals.org/content/27/5/605.full.pdf+html

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26. Costa SS, Mourato C, **Viveiros M**, Melo-Cristino J, Amaral L, Couto I. Description of plasmid pSM52, harbouring the gene for the Smr efflux pump, and its involvement in resistance to biocides in a meticillin-resistant *Staphylococcus aureus* strain. *Int J Antimicrob Agents*. 2013 May;41(5):490-2. doi: 10.1016/j.ijantimicag.2013.01.003. Epub 2013 Feb 21. doi: 10.1016/j.ijantimicag.2013.01.003. http://www.sciencedirect.com/science/article/pii/S0924857913000307

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31. Perdigão J, Macedo R, Silva C, Machado D, Couto I, **Viveiros M**, Jordao L, Portugal I. From multidrug-resistant to extensively drug-resistant tuberculosis in Lisbon, Portugal: the stepwise mode of resistance acquisition. *J Antimicrob Chemother*. 2013 Jan;68(1):27-33. doi: 10.1093/jac/dks371. http://jac.oxfordjournals.org/content/68/1/27.long

32. Costa SS, **Viveiros M**, Amaral L, Couto I. Multidrug Efflux Pumps in *Staphylococcus aureus*: an Update. *Open Microbiol J*. 2013;7:59-71. Epub 2013 Mar 22. doi: 10.2174/1874285801307010059. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3617543/pdf/TOMICROJ-7-59.pdf

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122. **Portugal I**, Covas MJ, Brum L, Viveiros M, Ferrinho P, Moniz-Pereira J, David HL. Outbreak of multiple drug-resistant tuberculosis in Lisbon: detection by restriction fragment length polymorphism analysis. *Int J Tuberc Lung Dis*. 1999 Mar;3(3):207-13. http://www.ingentaconnect.com/content/iuatld/ijtld/1999/00000003/00000003/art00007?token=004f1aa34d6178d2ea573d257025702c236e2f5f3172767c2b657c4e75477e4324576b6427386fa

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## BOOKS AND BOOK CHAPTERS (N = 19):

1. Ordway D.J., **Viveiros M**., Ventura F.A., Dockrell H.M. and Amaral L. (2005) Does multiple exposure to Mycobacterium tuberculosis lead to reduction of a Th1 immune response and concomitant presence of Th2 immune response which contributes to subsequent development of active tuberculosis?. In: Research Advances in Infectious Diseases, Mohan R.M. editor, Global Research Network, Kerala, India, p.15-34.

2. **Viveiros M**., Leandro C., Rodrigues L., Almeida J., Bettencourt R., Couto I., Carrilho L., Diogo J., Fonseca A., Lito L., Lopes J., Pacheco T., Pessanha M., Quirim J., Sancho L. and Salfinger M. (2006). Diagnóstico precoce da tuberculose multirresistente (TBMR): O Programa Faster-Track de Combate à Tuberculose Multirresistente na Grande Lisboa. In: Tuberculose - Impacto da Infecção VIH. Jaime Pina editor, Sociedade Portuguesa de Pneumologia - Hospital Pulido Valente – GlaxoSmithKline, Lisboa, Portugal, p.83-99.

3. **Viveiros M**. and Atouguia J. (2008) Tuberculose – Saúde Tropical. Edição Universidade Aberta (ISBN:978-972-674-494-8) 155 pp.
   http://loja.uab.pt/scripto/textos-de-cursos-nao-formais/produto/tuberculose-_1368.aspx

4. **Viveiros M**. (2010) Segurança no Laboratório de Microbiologia In: Microbiologia (1ª Edição), Wanda F. Canas Ferreira, João Carlos F. de Sousa and Nelson Lima editores, Lidel, Edições Técnicas, Lisboa, Portugal. pp. - 588-609 (ISBN 9789727575152)
   http://www.fca.pt/cgi-bin/lidel_main.cgi/?op=3&mnu=100&edicao=1&isbn=978-972-757-515-2

5. **Viveiros M**., Rodrigues L., Martins M., Couto I., Martins A., Spengler G. and Amaral L. (2009) Evaluation of efflux activity of bacteria by an ethidium bromide semi-automated fluorometric system. In: Antibiotic Resistance Protocols for Methods in Molecular Medicine Series, Second Edition. John Walker editor. Humana Press, Springer Science+Business Media, LLC. Londres, Reino Unido. pp. 159-172. (ISBN 978-1-60327-278-0).
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6. Martins M., Couto I., **Viveiros M**. and Amaral L (2009) Identification of efflux- mediated multi-drug resistance in bacterial clinical isolates by two simple methods. In: Antibiotic Resistance Protocols for Methods in Molecular Medicine Series, Second Edition. John Walker editor. Humana Press, Springer Science+Business Media, LLC. Londres, Reino Unido. pp. 143-157 (ISBN 978-1-60327-278-0).
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8. Amaral L., Fanning S., Spengler G., Rodrigues L., Iversen C., Martins M., Martins A., **Viveiros M**. and Couto I. (2011) Genetic regulation, physiology, assessment and inhibition of efflux pumps responsible for multi-drug resistant phenotypes of bacterial pathogens (II) In: Antibiotic Resistance: Causes and Risk Factors, Mechanisms and Alternatives. 2nd Edition_Hardcover. Adriel R. Bonilla and Kaden P. Muniz editors. NovaScience, Nova York, EUA. pp. 313-332. (ISBN 978-1-60741-623-4).
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9. Amaral L., Fanning S., Spengler G., Rodrigues L., Iversen C., Martins M., Martins A., **Viveiros M**. and Couto I. (2011) Genetic regulation, physiology, assessment and inhibition of efflux pumps responsible for multi-drug resistant phenotypes of bacterial pathogens (III) In: Multiple Drug Resistance. Agoston Meszaros and Gusztav Balogh editors. NovaScience, Nova York, EUA. 312 pags.. (ISBN 978-1-60741-595-4).
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10. Amaral L., Fanning S., Spengler G., Rodrigues L., Iversen C., Martins M., Martins A., **Viveiros M**. and Couto I. (2012) Genetic regulation, physiology, assessment and inhibition of efflux pumps responsible for multi-drug resistant phenotypes of bacterial pathogens (IV) In: Bacterial Pathogens: Virulence Mechanisms, Diagnosis and Management. Aimee Boulanger and Maison Blanc editors. NovaScience, Nova York, EUA. pp. 66-85. (ISBN 978-1-62081-887-9).
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11. **Viveiros M**. (2012) A Importância da Biossegurança Como Disciplina Curricular. In Workshop Biossegurança: Situação em Portugal. Sofia Núncio, Ana Pelerito, Rita Cordeiro editors. Ministério da Saúde. Instituto Nacional de Saúde Doutor Ricardo Jorge, IP, Lisboa, Portugal. pp. 13-17. (ISBN: 978-972-8643-75-1).
http://repositorio.insa.pt/bitstream/10400.18/1538/3/Workshop%20Biosseguran%C3%A7a%20-%20Situa%C3%A7%C3%A3o%20em%20Portugal.pdf

12. Amaral L., Martins A., Spengler G., Martins M., McCusker M., **Viveiros M**., Fanning S. and Molnar J. (2013) Structure, Genetic Regulation, Physiology and Function of the AcrAB-TolC Efflux Pump of *Escherichia coli* and *Salmonella*. In: Antimicrobial Drug Discovery-Emerging Strategies. George Tegos and E Mylonakis, editors. CABI Publishing, Oxfordshire, UK, pp. 44-61. (ISBN 781-84593-943-4).
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http://bookshop.cabi.org/?page=2633&pid=2372&site=191

14. Amaral L, Martins M, Couto I, **Viveiros M** (2013) Therapy of the XDR-TB Patients with Thioridazine - an Old Drug with New Applications. In: Tuberculosis - Diagnosis and Treatment (Advances in Molecular and Cellular Microbiology Series) T D McHugh, editor. CABI Publishing, Oxfordshire, UK, 304 pag. (ISBN 781-84593-807-9).
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15. **Viveiros M**. Couto I and Inácio J. (2014) Diagnóstico Molecular. In: Microbiologia Médica, António Meliço-Silvestre, Helena Barroso and Nuno Taveira editores, Lidel, Edições Técnicas, Lisboa, Portugal. (ISBN - 978-972-757-576-3).
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16. Portugal, I. and **Viveiros M**. (2014) *Mycobacterium* In: Microbiologia Médica, António Meliço-Silvestre, Helena Barroso and Nuno Taveira editores, Lidel, Edições Técnicas, Lisboa, Portugal. (ISBN - 978-972-757-576-3).
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17. **Viveiros M**., Couto I., Rossetti ML and da Silva PA (2014) Otimização, validação e controlo de qualidade de testes moleculares de diagnóstico. In: Abordagens Moleculares em Veterinária. Mónica V. Cunha e João Inácio editores, Lidel, Edições Técnicas, Lisboa, Portugal. (ISBN - 978-989-752-034-1).
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http://issuu.com/lidel/docs/abordagensmolecularesveterinaria/1

18. Costa P., Couto I., **Viveiros M**., and Inácio J. (2014) Nested and Multiplex Real Time PCR Using Dual-Labeled Probes: Detecting And Discriminating Mycobacterium Tuberculosis Complex Members In Cultures And Animal Tissues. In: Veterinary Infection Biology: Molecular Diagnostics and High-Throughput Strategies (Methods in Molecular Biology Series). Monica Cunha and João Inácio Editors. Humana Press, Springer Science+Business Media, LLC. Londres, Reino Unido. Vol. 1247. (ISBN 978-1-4939-2003-7).
http://www.springer.com/medicine/internal/book/978-1-4939-2003-7

19. Rodrigues L., **Viveiros M**., and Aínsa J. (2015) Measuring Efflux and Permeability in Mycobacteria. In: Mycobacteria Protocols (Methods in Molecular Biology Series), Tanya Parish and David Roberts, Editors. Humana Press, Springer Science+Business Media, LLC. Londres, Reino Unido. 3rd edition., XII, 412 p.Vol. 1285. (ISBN 978-1-4939-2449-3).
http://www.springer.com/life+sciences/microbiology/book/978-1-4939-2449-3

## PARTICIPATION AND COORDINATION OF RESEARCH PROJECTS:

**As Coordinator (n=8):**

1. 2004 - 2006 - Principal Investigator/Coordinator of the project - Fundação Calouste Gulbenkian - " Diagnóstico Rápido da Tuberculose Multiresistente na Grande Lisboa".

2. 2005 - 2007 - Principal Investigator/Coordinator - Fundação para a Ciencia e Tecnologia - 1ST PHASE - (POCTI/SAU-MMO/59370/2004)" Bombas de Efluxo em M. tuberculosis: caracterização molecular dos mecanismos de efluxo e uso de inibidores de efluxo como novos compostos anti-bacilares - Efflux-pumps in M. tuberculosis: molecular charecterizatuion of the efflux mechanism and use of efflux inhibitors as new anti-TB drugs".

3. 2007 - 2009 - Principal Investigator/Coordinator - Fundação para a Ciencia e Tecnologia - 2ND PHASE - (PPCDT/SAU-MMO/59370/2004) "Bombas de efluxo em Mycobacterium tuberculosis: caracterizacão molecular dos mecanismos de efluxo e uso de inibidores de efluxo como novos compostos anti-bacilares - Efflux-pumps in drug resistance of Mycobacterium tuberculosis: Molecular characterisation of the efflux mechanism and use of efflux inhibitors as new anti-tubercular compounds".

4. 2008-2012 - Principal Investigator/Coordinator - Fundação Calouste Gulbenkian - Projecto de apoio ao Plano Estratégico de Controlo da Tuberculose de Moçambique - Support for the Strategic Plan to Fight TB in Mozambique. Fundação Calouste Gulbenkian, Instituto de Higiene e Medicina Tropical, Instituto Nacional de Saúde Dr. Ricardo Jorge.

5. 2008 - 2011 - Principal Investigator/Coordinator - Fundação para a Ciencia e Tecnologia - (PTDC/BIAMIC/ 71280/2006) - Dinâmica fisiológica e mutacional da resistência aos antibióticos em Mycobacterium tuberculosis: a emergência da Tuberculose Multi-Resistente. - Mutational and physiological dynamics of drug resistance in Mycobacterium tuberculosis: the emergence of Multi-Drug Resistant Tuberculosis.

6. 2009 - 2013 - Principal Investigator/Coordinator - Fundação para a Ciencia e Tecnologia - (PTDC/SAUFCF/ 102807/2008) "Enhancing the killing of intracellular multi-drug resistant tuberculosis (MDRTB) by human macrophages: a new chemotherapeutic strategy to fight MDRTB".

7. 2009 - 2013 - Principal Investigator/Coordinator - Fundação para a Ciencia e Tecnologia - (PTDC/BIAMIC/ 105509/2008) "Helper compounds against multidrug resistant bacteria: revealing their mechanism of action".

8. 2012 - 2015 - Principal Investigator/Coordinator (Component IHMT/UNL) - “Formação em Diagnóstico Laboratorial de Tuberculose - ForDILAB TB”. Projecto conjunto Fundação Calouste Gulbenkian, Instituto de Higiene e Medicina Tropical e Instituto Nacional de Saúde Dr. Ricardo Jorge - Fundação Calouste Gulbenkian (instituição proponente – Drª Maria Hermínia Cabral - Parceiros: Instituto de Higiene e Medicina Tropical (Prof. Doutor Paulo Ferrinho, Prof. Doutor Isabel Leitão Couto e Prof. Doutor João Piedade) e Instituto Nacional de Saúde Dr. Ricardo Jorge (Professor Doutor José Calheiros e Drº Maria João Simões). Submetido ao Secretariado Executivo da Comunidade dos Países de Língua Portuguesa, no âmbito do Plano Estratégico de Cooperação em Saúde da CPLP.
   Nota: Projecto com o apoio e patrocínio do Representante Especial para Tuberculose do Secretário Geral das Nações Unidas, Sua Exª o Presidente da República Portuguesa, Dr. Jorge Sampaio.

**As Member of the Research Team (n=13):**

1. 1992 - 1994 - Junior Researcher in the project - C.E.E./D.G.XII - "AIDS Clinical and Seroimmunological reevaluation of HIV-2 positive people of Guiné-Bissau"; (Contract Nº TS2 - 001- P(TT) - EEC)- Coordinator - Prof. Wanda Canas-Ferreira.

2. 1994 - 1997 - Researcher in the project - Fundação Calouste Gulbenkian - (Desp-FCG-05/01/1994) - "Estudo cooperativo internacional sobre a imunidade protectora em tuberculose: investigações clinico-epidemiológicas e laboratoriais relacionadas com perspectivas de novos métodos de diagnóstico e pesquisa de nova geração de vacinas" - Coordinator - Prof. Hugo Ayres Lopes David.

3. 1995 - 1998 - Researcher in the project - Comissão Nacional de Luta Contra a SIDA - National Committee Against AIDS -(Projecto Nº 9-1.10.6./94) -"Estudo da relação tuberculose-SIDA e dos problemas de transmissão da tuberculose nas populações de alto risco, com a introdução, desenvolvimento e aplicação prática de novos métodos de diagnóstico rápido da tuberculose". Coordinator - Prof. Hugo Ayres Lopes David.

4. 2002 - 2005 - Researcher in the project - Fundação Calouste Gulbenkian - (SDH.IC.I.01.17 ) - " Grupo de Trabalho para a Tuberculose na Grande Lisboa - TB-TASK-FORCE for Greater Lisbon" - Coordinator - Prof. Leonard Amaral.

5. 2002 - 2005 - Researcher in the project - Fundação Calouste Gulbenkian - " Pesquisa de novos marcadores de imunidade celular para a detecção precoce da infecção por Mycobacterium tuberculosis - New cellular immune markers for early detection of active TB" - Coordinator - Prof. Leonard Amaral.

6. 2002 - 2005 - Researcher in the project - Fundação para a Ciencia e Tecnologia - (POCTI/FCB/37579/2001)" A actividade antimicobacteriana dos derivados de fenotiazinas, uma alternativa efectiva contra M. tuberculosis resistente aos antibióticos - Phenothiazines as an effective alternative against MDRTB" - Coordinator - Prof. Leonard Amaral.

7. 2008 - 2011 - Member/Researcher in the EU Consortium/Action – "Cost Action BM0701 - Antibiotic Transport and Efflux : New Strategies to combat bacterial resistance (Acronym:ATENS) "- European Science Foundation.

8. 2009 - 2012 - Researcher in the project –"Diagnóstico e Epidemiologia Molecular de M/XDR-TB na Grande Lisboa: a Detecção Precoce na Prevenção da Emergência e Disseminação de Estirpes de M. tuberculosis Extensivamente Resistentes. - Early Molecular Detection of M/XDRTB in the Great Lisbon Healthcare Region" - Fundação Calouste Gulbenkian - Serviço de Saúde e Desenvolvimento Humano – Ref. P-99934 - Programa de Apoio à Investigação na Área da Microbiologia Clínica. Coordinator - Prof. Isabel Couto.

9. 2010 - 2013 - Researcher in the project - Quadro de Referência Estratégico Nacional (QREN)- "Acompanhamento da sequenciação e validação de "primers", anotação e sua validação, construção de uma "toolbox" de transcriptómica dirigida e implementação de ensaios de qRT-PCR de duas estirpes de Sphingomonas sp. produtoras de carotenoides". Coordinator - Biotech company - Biotrend,Lda.

10. 2010 - 2013 - Researcher in the project - Fundação para a Ciência e Tecnologia - (PTDC/CVT/111634/2009) – ZoonTB - Novas abordagens moleculares para a detecção e discriminação de membros do Complexo Mycobacterium tuberculosis associados a tuberculose animal e avaliação do potencial zoonótico destas espécies em Portugal" - Instituto Nacional de Recursos Biológicos, I.P. (INRB/MADRP) instituição proponente - Coordinator - Inv. Doutor João Inácio.

11. 2011 - 2014 - Researcher in the project - Fundação para a Ciência e Tecnologia - (PTDC/BIA-MIC/121859/2010) - " Type-II NADH-menaquinone oxidoreductase (NDH-2) and the respiratory chain of *M. tuberculosis*: new therapeutic targets to fight tuberculosis." - Grupo de Micobactérias da Unidade de Microbiologia do IHMT/UNL (instituição proponente). Parceiro: Fundação da Faculdade de Ciências e Tecnologia (FFCT/FCT/UNL). Coordinator - Prof. Isabel Couto.

12. 2013 - 2016 - Researcher in the project - Fundação para a Ciência e Tecnologia - (PTDC/IVC-COM/5016/2012) - "OSYRISH - Organizational and Informational System to Improve Healthcare Associated Infections management in a set of Hospitals -." Unidade de Saúde Internacional do IHMT/UNL (instituição proponente). Parceiros: Hospitais de Lisboa e da CPLP. Coordinator - Prof. Luis Lapão.

13. 2015-2017 - Researcher in the project - Programa Iniciativas em Saúde Pública | EEA Grants - HAITool – A Toolkit to Prevent, Manage and Control Healthcare-Associated Infections in Portugal (EEA Grants 182DT3). Unidade de Saúde Internacional do IHMT/UNL (instituição proponente). Parceiros: Centro Hospitalar de Lisboa Oriental - Lisbon, Portugal e The University Hospital of Northern Norway, Tromsø, Norway. Coordinator - Prof. Luis Lapão.

## EXPERIENCE AS SCIENTIFIC ADVISER/SUPERVISOR (N=36):

**Post-doctoral fellows supervised or ongoing (n= 3)**
**Post-doctoral fellows co-supervised or ongoing (n= 3)**
**PhD Students supervised or ongoing (n= 4)**
**PhD students co-supervised or ongoing (n= 3)**
**MSc Students supervised or ongoing (n = 19)**
**BSc students supervised (n = 6)**

1. 1995/1996 – Co-supervisor of Paulo Jorge Gonçalves de Bettencourt - Licenciatura Thesis in Engenharia Biotecnológica do Instituto Superior de Humanidades e Tecnologias (ISHT) / Universidade Lusófona – ".- Supervisor Profª. Doutora Laura Brum

2. 1996/1997 - Supervisor of Patrícia Raquel Fernandes de Melo Moreira - Licenciatura Thesis in Microbiologia pela Escola Superior de Biotecnologia da Universidade Católica Portuguesa - "Avaliação do teste de diagnóstico *Mycobacterium tuberculosis* LCX Abbott para amostras extrapulmonares".

3. 1996/1997 - Supervisor of Susana Frazão Pinheiro - Licenciatura Thesis in Microbiologia pela Escola Superior de Biotecnologia da Universidade Católica Portuguesa - "Avaliação do teste de identificação MTB LCX Abbott para amostras pulmonares".

4. 2001/2002 - Supervisor of Ana Isabel Caldeira de Jesus - Licenciatura Thesis in Engenharia Biotecnológica da Universidade Lusófona - "Resistência à tetraciclina em *Escherichia coli* por mecanismos de extrusão";.

5. 2003/2004 - Supervisor of Mafalda Lopes Brito - Licenciatura Thesis in Engenharia Biotecnológica do Instituto Superior Técnico da Universidade Técnica de Lisboa - "Resistência aos antibióticos em *Staphylococcus aureus* e *Escherichia coli* por mecanismos de extrusão".

6. 2003/2004 - Supervisor of - Francisco Estrela de Soure Dores - Licenciatura Thesis in Biologia Microbiana da Faculdade de Ciências de Lisboa - "Isolamento, purificação e caracterização de uma fracção proteica do envelope celular *de Staphylococus aureus* associada à adaptação a elevadas concentrações de brometo de etídio".

7. 2004/2005 - Supervisor of Maria João Lobo da Cruz Rocha Monteiro Caetano - MSc in Medical Microbiology Thesis (IHMT/UNL) -"Diagnóstico molecular de micobacterioses em pacientes co-infectados com o VIH. Importância clínica, laboratorial e epidemiológica (em colaboração com o Hospital Egas Moniz)".

8. 2004/2005 - Supervisor of Liliana Isabel Dias Rodrigues- MSc in Medical Microbiology Thesis (IHMT/UNL) - "Diagnóstico precoce da tuberculose multiresistente na Grande Lisboa".

9. 2006/2007 - Supervisor of - Ana Laura Paixão - "Modelação do efluxo de Brometo de Etídio em *Escherichia coli*" . MSc in Biological Engineering from Instituto Superior Técnico da Universidade Técnica de Lisboa .

10. 2006/2007 - Supervisor of Ana Daniela de Araújo Sampaio - MSc in Medical Microbiology Thesis (IHMT/UNL)- "A contribuição da resistência fenotípica na resistência aos tuberculostáticos no género *Mycobacterium*" .

11. 2006/2007 - Supervisor of Ana Catarina Heitor Martins Cardoso - MSc in Medical Microbiology Thesis (IHMT/UNL)- "Efluxo de compostos fluorescentes em *Escherichia coli* e sua correlação com a resistência clínica aos antibióticos."

12. 2006/2007 - Co-supervisor of Sofia Maria Mourão Marques dos Santos Costa – MSc in Medical Microbiology Thesis (IHMT/UNL)- "Caracterização de proteínas do envelope celular de *S. aureus* associadas ao efluxo de compostos biocidas".

13. 2007/2008 - Supervisor of Nadia Borges Charepe - MSc in Biomedical Sciences Thesis (IHMT/UNL) - "Estudo biológico dos mecanismos de resistência aos antibióticos desenvolvido em *Escherichia coli* sujeita a pressão antibiótica prolongada".

14. 2008/2009 - Supervisor of Jorge Alexandre dos Santos Ramos – MSc in Medical Microbiology Thesis (IHMT/UNL)- "Avaliação do efeito sinérgico de inibidores de bombas efluxo na susceptibilidade do género *Mycobacterium* aos tuberculostáticos".

15. 2008/2009 - Supervisor of Susana Cristina Nunes Costa – MSc in Medical Microbiology Thesis (IHMT/UNL)- "Caracterização bioquímica e molecular do efluxo de Brometo de Etídeo em *Escherichia coli*"

16. 2004/2008 - Co-supervisor of Marta Martins (SFRH/BD/14319/2003) - PhD Thesis in Medical Microbiology of IHMT/Universidade Nova de Lisboa - "The antimycobacterial activity of thioridazine derivatives, against Drug Resistant Mycobacterium tuberculosis. In vitro, ex vivo and in vivo studies".- Supervisor Prof. Doutor Leonard Amaral.

17. 2004/2008 - Co-supervisor of Ana Sofia Fernandes Martins (SFRH/BD/19445/2004)– - PhD Thesis in Medical Microbiology of IHMT/Universidade Nova de Lisboa -"The effects of Carpobrotus edulis methanol extract and purified compound(s) against multi-drug resistant Mycobacterium tuberculosis strains" - Supervisor Prof. Doutor Leonard Amaral.

18. 2006/2010 - Supervisor of Liliana Isabel Dias Rodrigues (SFRH/BD/24931/2005) - PhD Thesis in Medical Microbiology of IHMT/Universidade Nova de Lisboa - "The role of the efflux mechanisms in Multi-drug Resistance in Mycobacterium tuberculosis".

19. 2009/2014 - Supervisor of Diana Isabel Oliveira Machado (SFRH/BD/65060/2009) - PhD Thesis in Medical Microbiology of IHMT/Universidade Nova de Lisboa - "The The dynamics of drug resistance in Mycobacterium tuberculosis: exploring the biological basis of multi- and extensively drug resistant tuberculosis (MDR/XDRTB) as a route for alternative therapeutic strategies".

20. 2009/2014 - Co-supervisor of - Pedro Miguel Nisa Costa (SFRH/BD/64136/2009) - PhD Thesis in Medical Microbiology of IHMT/Universidade Nova de Lisboa - "Novas abordagens moleculares para a detecção e diferenciação rápida de espécies do complexo *Mycobacterium tuberculosis* e avaliação do seu potencial zoonótico em Portugal". - Supervisor Doutor João Inácio.

21. 2009/2010 – Co-supervisor of Miguel José Simas do Rosário Evaristo – MSc in Biomedical Sciences Thesis (IHMT/UNL) - "Biological activity of well-defined heterocyclic compounds on efflux pump systems of bacteria and cancer cells". - Supervisor Doutora Gabriella Spengler.

22. 2010/2014 - Post-Doc Supervisor of - Marta Sofia Lopes Martins (SFRH/BPD/63871/2009) - Post-Doc program in Medical Microbiology of IHMT/Universidade Nova de Lisboa - "Targeting the human macrophage with combinations of second-line TB drugs and inhibitors of Ca2+ and K+ transport to enhance the killing of intracellular Multi-Drug Resistant *M. tuberculosis* (MDR-TB) – a novel approach to limit the emergence of XDRTB".

23. 2010/2011 - Co-supervisor of Lisa Santos Machado – MSc in Medical Microbiology Thesis (IHMT/UNL) - "The inhibitory activity of synthetic compounds and ions against transporters of multi-drug resistant bacteria". - Supervisor - Professor Doutor Leonard Amaral.

24. 2010/2011 - Supervisor of Antónia Rosa Trindade Pinto – MSc in Biomedical Sciences Thesis (IHMT/UNL) - O Efluxo em *Escherichia coli*: novas estratégias terapêuticas para combate à multi-resistência."

25. 2010/2011 - Co-supervisor of Vanessa Roque Cabral – MSc in Química Farmacêutica e Terapêutica da Faculdade de Farmácia da Universidade de Lisboa - "Efflux pump inhibitors in multidrug resistant bacterial strains from medicinal plants". Supervisor - Professora Doutora Maria José Umbelino Ferreira.

26. 2010/2011 – Co-supervisor of Ana Carolina Vencá – MSc in Biotecnologia do Instituto Superior Técnico da Universidade Técnica de Lisboa, "Identification and characterisation of efflux pumps in *Rhodococcus erythropolis*." Supervisor - Doutora Carla C.C.R. de Carvalho.

27. 2011/2013 - Co-supervisor of Nureisha Abdul Gafur Cadir – MSc in Saúde Pública da Faculdade de Medicina da Universidade Eduardo Mondlane – Mozambique - "Avaliação do desempenho dos testes imunocromatográficos rápidos (BD MGIT TBc Identification Test e TB Ag MPT64 Device) para a diferenciação do Complexo *M. tuberculosis* das Micobactérias Não Tuberculosas". Supervisores - Professor Doutor Mohsin Sidat e Doutor Eduardo Samo Gudo.

28. 2012/2015 - Post-Doc Supervisor of Paulo Rabna (SFRH/BPD 64/2011) Instituto Nacional de Saúde Pública da Guiné-Bissau - "Tuberculose Multirresistente na Guiné-Bissau ".

29. 2012/2013 – Supervisor of Vânia Filipa Ferreira da Silva – MSc in Biomedical Sciences Thesis (IHMT/UNL) – "Estudo de determinantes de efluxo em *Mycobacterium avium* e a sua relação com a resistência aos antibióticos." Co-supervisor – Professora Isabel Couto.

30. 2013/2014 – Co-supervisor of Ana Luísa Chocalheiro – MSc in Biotecnologia da Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa, "Application of Lab-on-Paper technology to colorimetric biosensors for the detection of tuberculous mycobateria." Supervisor – Professora Doutora Elvira Fortunato.

31. 2013/2014 – Co-supervisor of André Meneses Valério – MSc in Engenharia Biomédica da Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa, "Desenvolvimento de testes de susceptibilidade a antibióticos do tipo E-tests em suportes de papel utilizando a tecnologia lab-on-paper" Supervisor – Professora Doutora Elvira Fortunato.

32. 2013/2017 - Supervisor of Moisés Franciso - PhD Thesis in Medical Microbiology of IHMT/Universidade Nova de Lisboa - "Caracterização microbiológica e molecular das estirpes de Salmonella spp isoladas em amostras de fezes, águas residuais e em ovos de produção aviárias na região de Luanda e dos seus perfis de resistência aos antimicrobianos – o seu impacto na saúde pública."

33. 2015/2018 - Supervisor of Ana Maria Buttle de Mendonça Mourão Possidónio de Armada - PhD Thesis in Human Genetics and Infectious Desiases of IHMT/Universidade Nova de Lisboa - "Modulation of ABC transporters in multidrug resistance (MDR): From prokaryotic to eukaryotic cells."

34. 2014/2017 - Post-Doc Co-Supervisor of – João Ruben Lucas Mota Perdigão (SFRH/BPD/95406/2013) - Post-Doc program in Microbiology of Pharmacy Faculty/Universidade de Lisboa - "Tuberculosis in Portugal and Portuguese-speaking African Countries: From Genomics to Product Development". Supervisor – Professora Doutora Isabel Portugal.

35. 2014/2015 - Supervisor of Ana Sofia Mourão Simões – MSc in Medical Microbiology Thesis (IHMT/UNL) - "Characterization of drug resistance mechanisms underlying colistin heteroresistance in clinical isolates of *Acinentobacter baumanni*".

36. 2015/2018 - Post-Doc Supervisor of - Diana Isabel Oliveira Machado (SFRH/BPD/100688/2014) - Post-Doc program in Medical Microbiology of IHMT/Universidade Nova de Lisboa - "Exploring the mode of action of efflux inhibitors against *Mycobacterium tuberculosis*: an approach to prevent efflux-mediated resistance and boost therapy in active and latent tuberculosis".

14. 2015/2016 - Post-Doc Co-Supervisor of – Alexandra Simões - Post-Doc program in Medical Microbiology of IHMT/Universidade Nova de Lisboa - "Using molecular, epidemiological, clinical and social data to prevent and control antibiotic resistant healthcare-associated infections". Programa Iniciativas em Saúde Pública | EEA Grants - HAITool – A Toolkit to Prevent, Manage and Control Healthcare-Associated Infections in Portugal (EEA Grants 182DT3). Unidade de Saúde Internacional do IHMT/UNL (instituição proponente). Parceiros: Centro Hospitalar de Lisboa Oriental - Lisbon, Portugal e The University Hospital of Northern Norway, Tromsø, Norway. Main-supervisor and Coordinator – Investigador Doutor Luis Lapão.

15. 2014/205 – Supervisor of Marta Isabel Martins Gabriel – MSc in Biomedical Sciences Thesis (IHMT/UNL) – "Resposta imunitária inflamatória de macrófagos na presença de inibidores de efluxo." Co-supervisors – Professora Gabriela Santos-Gomes e Investigadora Ana Maria Buttle de Mendonça Mourão Possidónio de Armada.

## AWARDS:

2003 – Merit Award for Research in Infectious Diseases (2º Place) - Glaxo-Smithkline Fundation – Portuguese Society of Infectious Diseases - "A Implementação do Programa "TB-FAST-TRACK" de Combate à Tuberculose Multiresistente na Grande Lisboa - Implematantion of the TB-FAST-TRACK program in Lisboa".

2009 – Merit Award for Best Panel Communication National Congress of Microbiology and Biotechnology - Congresso Nacional de Microbiologia e Biotecnologia de 2009 d- "Cell and Tissue Engineering, Biomaterials and Nanobiotechnologies". Authors: Veigas B., Perdigão J., Portugal I., Couto I., Viveiros M. and Baptista P.V. ( 2009) Use of Au-nanoprobes for the detection of SNPs associated with antibiotic resistance in Mycobacterium tuberculosis. Congresso Microbiotec 2009. Congresso Nacional de Microbiologia e Biotecnologia MicroBiotec09. Vilamoura (Portugal) 28 a 30 de November de 2009.

2012 – Santander/Totta – Universidade Nova de Lisboa - Merit Award 2012 - Prémio de Mérito Científico Santander Totta – Universidade Nova de Lisboa – Title: NanoTB - Nanodiagnostics for XDRTB at point-of-need. Miguel Viveiros (IHMT/UNL), Pedro Baptista (FCT/UNL), Isabel Couto (IHMT/UNL).

## SELECTED INVITED LECTURES (N=18):

1. **Viveiros M**. (2009). Evaluation of efflux pumps of Mycobacteria by a semi-automated EB method. Invited Speaker at COST Action BM0701: Antibiotic Transport and Efflux: New Strategies to combat bacterial resistance (ATENS), Cracóvia (Polónia), a 18 may 2009.

2. **Viveiros M**. (2010). Cutaneous infections caused by mycobacteria. Invited Speaker at the Spring Meeting of the Portuguese Society of Dermatology and Venerial Diseases.. V. N. Gaia (Portugal), 23 - 24 April 2010.

3. **Viveiros M**. (2011). Atypical Mycobacteriosis - Infecções por micobcterias atípicas Invited Speaker at the XII Jornadas Nacionais de Infecciologia Pediátrica. Braga (Portugal), 19 - 21 de May 2011.

4. **Viveiros M**. (2011). Direct detection of resistance in Mycobacterium tuberculosis: from line to nano-probe assays. Invited Speaker at the World TB Day Conference - Contribution of scientific research in the fight against tuberculosis. Institute of Tropical Medicine, Antwerpia, (Belgica), a 22 de Março de 2011.

5. **Viveiros M**. (2011). Resistencia fisiológica em Mycobacterium tuberculosis: impacto na resistência adquirida e novas estratégias quimioterapeuticas adjuvantes Invited Speaker at the Simpósio Internacional de Tuberculose Avanços e desafios no século XXI 02 e 03 de Dezembro de 2011.

6. **Viveiros M**. (2012). Cost-efficient diagnosis of tuberculosis: culture, molecular techniques and immunological markers. Invited Speaker at the European Congress of Clinical Microbiology and Infectious. 22nd European Congress of Clinical Microbiology and Infectious Diseases, London, United Kingdom, 31 March – 3 April 2012.

7. **Viveiros M**. (2012). Test de susceptibilidad cuantitativo de 1ª y 2ª línea para Mycobacterium tuberculosis usando lo BACTEC MGIT 960 con software TB eXiST : un protocolo en desarrollo en Europa. Invited Speaker at the XVI Reunion del grupo español de Micobacteriologia - GEM 2012. Cordoba 22 – 24 March 2012

8. **Viveiros M**. (2012). The semi-quantitative drug susceptibility test of 1st and 2nd line drugs for Mycobacterium tuberculosis using the MGIT 960TBTM culture system coupled with the BD EpiCenter ™ TB-eXiST software. XIV Simpósio Brasileiro de Micobactérias - XXI Congreso Latinoamericano de Microbiología. Santos, São Paulo, Brasil. 1-5 November 2012.

9. **Viveiros M**. (2013). Significance of Efflux in Multidrug resistance in Mycobacterium tuberculosis. Invited Speaker at the Gordon Research Conferences. Multi-Drug Efflux Systems. Shared Molecular Mechanisms but Diverging Roles in Physiology and Medicine. Four Points Sheraton / Holiday Inn Express, Ventura, (CA, USA), March 17-22.

10. **Viveiros M**. (2013). Epidemiology of infections due to NTM. Speaker at the Infections due to non-tuberculous mycobacteria: Educational Workshop – 23rd European Congress of Clinical Microbiology and Infectious (ECCMID). European Congress of Clinical Microbiology and Infectious Diseases, Berlin (Germany), 31 March to 3 April 2013.

11. **Viveiros M**. (2013) O Projecto FORDILAB-TB Formação em Diagnóstico Laboratorial de Tuberculose no espaço da CPLP. Seminar: Innovations for Tuberculosis Control, Maputo (Mozambique) 14 – 16 May 2013.

12. **Viveiros M**. (2013) "Estética y MNT. Un problema emergente en Portugal". XVII Taller Internacional sobre Tuberculosis, Barcelona (Spain) 4 – 5 November 2013.

13. **Viveiros M**. (2014) Efflux inhibitors as adjuvants in drug resistant tuberculosis therapy. World's Tuberculosis day international conference, Ghent University "Het Pand", Gent, Belgium. 21st March 2014.

14. **Viveiros M**. (2014). How to diagnose mycobacterial infections in low-income countries: Educational Workshop – Invited Speaker at the 24th European Congress of Clinical Microbiology and Infectious (ECCMID). European Congress of Clinical Microbiology and Infectious Diseases, Barcelona (Spain), 10th May 2014.

15. **Viveiros M**. (2014) Efflux inhibitors against drug resistant *Mycobacterium tuberculosi*s: adjuvants of antimycobacterial agents and enhancers of macrophage killing activity. Invited Speaker at the VII Meeting of the Latin-American Society of Tuberculosis and other Micobacteriosis (SLAMTB), Canela, Brazil. 15th September 2014.

16. **Viveiros M**. (2014) Programatic Implementation of Molecular Tests for TB diagnoses in low and middle income countries – Challenges and Perspectives. Invited Speaker at the IV National Workshop of Brazilian Tuberculosis Research Network (REDETB), Canela, Brazil. 15th September 2014.

17. **Viveiros M**. (2014) Infecções respiratórias: tuberculose pulmonar - novos métodos de identificação e detecção de resistências - I Jornadas do Médico Interno de Patologia Clínica. Ordem dos Médicos, Lisboa, Portugal, 26th September 2014.

18. **Viveiros M.** (2015) Efflux Modulators as Adjuvants of Anti-Tuberculosis Therapy and Enhancers of Macrophage Killing Activity: A New Concerted Strategy Against Drug Resistant *Mycobacterium tuberculosis*. Invited Speaker at the Gordon Research Conferences. Multi-Drug Efflux Systems: A Paradigm Shift from Fundamental Mechanisms to Practical Applications. Renaissance Tuscany Il Ciocco Resort; Lucca (Barga), Italy, April 26th-May 1st.

## CONFERENCE ORAL AND POSTER COMMUNICATIONS (N= >150).