

# **CURRICULUM VITAE**



## **PERSONAL DATA**

**Name:** MARIA LUÍSA JORGE VIEIRA

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<https://www.scopus.com/authid/detail.uri?authorId=7202140762>

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### **ResearchGate**

URL: [https://www.researchgate.net/profile/Maria\\_Vieira8](https://www.researchgate.net/profile/Maria_Vieira8)

### **Google Scholar**

URL: [https://scholar.google.pt/citations?user=K3\\_leCUAAAAJ&hl=pt-PT](https://scholar.google.pt/citations?user=K3_leCUAAAAJ&hl=pt-PT)

## **1. ACADEMIC QUALIFICATIONS**

### **2006 Ph.D. in Biomedical Sciences (specialization in Microbiology)**

Instituto de Higiene e Medicina Tropical  
Universidade NOVA de Lisboa

### **1997 Master degree in Medical Parasitology (1<sup>st</sup> edition)**

Instituto de Higiene e Medicina Tropical  
Universidade NOVA de Lisboa

**1988 Degree in Biology (Scientific Branch) - 5 years**

Faculdade de Ciências, Universidade de Lisboa

**1984 Degree\* in Pathological Anatomy**

Escola dos Serviços de Saúde de Lisboa (*current Escola Superior de Tecnologias da Saúde de Lisboa, from Instituto Politécnico de Lisboa*) / Faculdade de Ciências Médicas, Universidade Nova de Lisboa (\*equivalence after additional training in that area of expertise).

## 2. PROFESSIONAL ACTIVITIES

**1979-1987** Teaching Activity (Secondary Education), in several Educational Institutions (Public and Private);

**1987-1995** Hospitais da Universidade de Coimbra (HUC) (*after public tender*)  
Pathological Anatomy Service (including Electronic Microscopy Lab);

**Jan' 1996** Entry into the Scientific Research Career - *after public tender* - as **Research Trainee** (Laboratory of Leptospire) at the Instituto de Higiene e Medicina Tropical (IHMT) from Universidade Nova de Lisboa (UNL);

**1998-2006** **Research Assistant**, IHMT, UNL  
Teaching and Research Unit of Leptospirosis and Lyme Borreliosis;

**Jul'2006 - ...** **Assistant Researcher PhD** [definitive appointment]\*  
\*[*currently designated as 'indeterminate time'*] of the IHMT Staff, in full time with exclusive dedication.

## 3. INSTITUTIONAL ACTIVITIES

**2007-2010** **Researcher and interim Responsible** of Leptospirosis and Lyme Borreliosis Unit, IHMT, UNL (substitution of Unit Head) (*since sep'07*).

**2010 - ...** **Member** (elected) of the Scientific Council.

**2010 -2011** **Head** of Leptospirosis and Lyme Borreliosis Unit, HMT, UNL.

**2011 - ...** **Head** of Leptospirosis and Lyme Borreliosis Laboratory integrated in the Medical Microbiology Unit, IHMT, UNL.

**2011-2012 Focal point** - WHO Afro - External Quality Assurance Programme (EQAP) for Epidemic and Pandemic Response in Microbiology;

**2013-2015 Director** of Medical Microbiology Unit, IHMT, UNL;

**2015-2016 Member** of the Fiscal Council - ADMT - Associação para a Defesa da Medicina Tropical (Association for the Defense of Tropical Medicine).

## 4. AREAS OF SCIENTIFIC RESEARCH

### 4.1 MEDICAL MICROBIOLOGY (BACTERIOLOGY SUB AREA)

#### Main areas of interest:

- i) Tick borne disease (eg Lyme disease);
- ii) Antigenic and molecular characterization of spirochetes of the genus *Leptospira*, including new isolates from Portugal, Angola, Guinea-Bissau and Mozambique, and *Borrelia burgdorferi* s.l. complex from Portugal and Brazil;
- iii) Epidemiological surveillance of zoonotic spirochetes in Portugal;
- iv) Tick relationship (vector) - host - bacterium;
- v) Development of new molecular tools for diagnosis and
- vi) Lyme disease *versus* multiple sclerosis - truth or myth?

### 4.2 OTHER AREAS

1. Public health;
2. Environment and Climate Change (with application of Geographic Information Systems);
3. Laboratory Biosafety and Quality Control.

### 4.3 I&D CENTERS

- Since November 2015 - is an integrated membership of the "*Global Health and Tropical Medicine - GHTM*" - Vector Borne Diseases and Pathogens (VBD)".
- September 2007 to December 31, 2014 - Effective membership of the "*Microbiological Resource Center - CREM*", R & D Unit of the Foundation for Science and Technology (FCT), headquartered at the Faculty of Science and Technology / Universidade Nova de Lisboa - FCT / UNL.

## 5. RESEARCH PROJECTS

### 5.1 COMPLETED PROJECTS

(\*as Team member; \*\*as Pincipal Investigator)

#### ➤ (\*) 2004-2008

**Title:** *Epidemiology and Control of leptospirosis in the Azores* (Scientific Cooperative Agreement No. 56-4001-3-F185)

**Funding**

**Entity** EUCOM/USDA (European Command in the US Department of Defense/ US Department of Agriculture), e Governo Regional dos Açores

**Duration** 5 anos, com avaliação anual

**Scientific Coord.** M Collares Pereira

**Other Participants** **ML Vieira (resp. área laboratorial)**, (...), equipa multidisciplinar (CBA, FCUL); HDES (Ponta Delgada) e HSEIT (Terceira); LRV (Terceira), entre outras Entidades Regionais

#### ➤ (\*\*) 2006-2008

**Title:** *Ensaio laboratorial de um teste de rastreio para a Leptospirose*  
*Laboratorial development of a screening test for Leptospirosis*

**Funding**

**Entity** Agência de Inovação SA, PRIME, Medida 3.1. Programa IDEIA, Apoio à Investigação e Desenvolvimento Empresarial Aplicado.

**Acronym** MACROLEP

**Durration** 2 years (May'06 – May 2008)

**Scientific Coord.** M Collares-Pereira / **ML Vieira** (since Sept. 2007)

**Other participants** T Carreira (ULBL), V da Conceição (Fellowship); Empresa ImunoSTAR (Biocodex), Porto.

➤ (\*) 2009-2012

**Title:** *Emergent Aspects of Human Leptospirosis in São Miguel: advances in the study of the parasite-host relationship*

**Funding**

**Entity** FCG (Calouste Gulbenkian Foundation) – P-99888, SDH-49, Clinical Microbiology

**Duration** 2 years (+1)

**Scientific Coord.** L Mota-Vieira - Unit of Molecular Genetics and Pathology (UGPM), Hospital do Divino Espírito Santo de Ponta Delgada, (HDESPD), São Miguel, Azores.

**Other Participants** **M Luisa Vieira**, T Carreira (Leptospirosis & Lyme Borreliosis Unit), IHMT, UNL

➤ (\*\*) 2010-2012

**Title:** *Contribution to the study of the association between multiple sclerosis and Borreliosis of Lyme: laboratory, clinic and eco-epidemiological aspects*

**Funding**

**Entity** Own Funds (Leptospirosis & Lyme Borreliosis Unit /IHMT) and financial support of the Portuguese Society of Multiple Sclerosis (SPEM)

**Acronym** **EMBLYME**

**Duration** 2 years

**Scientific Coord.** **M Luisa Vieira**

**Other participants** M Nunes (Project Fellowship) and T Carreira (Leptospirosis & Lyme Borreliosis Unit), IHMT, UNL and Neurology Services of diverse Portuguese Hospitals.

## 5.2 EXPRESSIONS OF INTEREST (since 2011 ...)

### February/2011

**Title:** *Climate change and ixodid ticks in Portugal; emerging and re-emerging diseases*

**Acronym** CLIMATICKDIS

**Funding Entity** Foundation for Science and Technology (PTDC/SAL-SAP/119449/2010)

**Proponent** **M Luísa Vieira** [Leptospirosis & Lyme Borreliosis Unit, IHMT, CREM. (Microbiological Resources Center), UNL]

✓ **November/2013**

**Title:** *Multiple Sclerosis and Hidden Borrelia: Exploring a possible connection*

**Acronym** SCLEROLYME

**Funding Entity** Foundation for Science and Technology (EXPL/IMI-MIC/1322/2013)

**Proponent** **M Luísa Vieira** [IHMT, CREM (UNL)]

✓ **Janeiro/2015**

**Title:** *Multiple Sclerosis and Borrelia, a myth or reality?*

**Acronym** SCLEROLYME II

**Funding Entity** Foundation for Science and Technology (PTDC/BIA-MIC/5232/2014)

**Proponent** **M Luísa Vieira** [IHMT, GHTM (Global Health Tropical Medicine), UNL]

**Other Participants** Armada A, UEI Medical Microbiology, IHMT, GHTM, UNL; G Santos-Gomes, UEI Medical Parasitology, IHMT, GHTM, UNL; M Neves Cardoso, University of Trás-os-Montes e Alto Douro (UTAD); Y Nóbrega, University of Brasília (UnB) Brazil; P Alegria, Beatriz Ângelo Hospital (Neurology Service), and other National Neurology Services.

✓ (2017) – awaiting results

**Title:** *Development and evaluation of an integrated multiple platform for studies of the Fasciola hepatica - host relationship: genomics, epigenomics and symbionts.*

**Acronym** Fasciola3D

**Funding Entity** Foundation for Science and Technology  
02/SAICT/2017 - 2020 - PORTUGAL

**Proponent** Isabel Maurício (GHTM, IHMT/UNL)

**Team member** **M Luisa Vieira** (GHTM, IHMT/UNL) and other GHTM members

✓ (2017)

**Title:** BUILT-HEALTH - Built Environment and Public Health: an intra-urban study in Cape Verde

**Funding Entity** Foundation for Science and Technology - AKDN

**Proponent** Luzia Gonçalves (GHTM, IHMT/UNL)

**Participation** Diverse Portuguese-Speaking African Countries (Cape Verde, Angola, Mozambique and Sao Tome and Principe).

**Team member** **M Luisa Vieira** (GHTM, IHMT/UNL) and other GHTM members

## 6. AWARDS / DISTINCTIONS

Year	Prize or distinction	Promoter Entity
2015	<p>“Best Poster” award attributed to the presentation entitled <i>“Leptospirosis in Seroepidemiological study among febrile malaria suspected patients. Fortes-Gabriel EMV, Carreira T, Nunes M, <b>Vieira ML.</b> Congress of Microbiology and Biotechnology - Microbiotec’15. 10-12 Dec. University of Evora, Portugal.</i></p>	<p>Portuguese Society of Biotechnology</p>
2015	<p>Honorable mention attributed to the Poster entitled <i>“First Detection of <i>Borrelia burgdorferi</i> DNA in wild boars hunted”. Faria AS, [...], <b>ML Vieira</b></i></p>	<p>Institute of Hygiene and Tropical Medicine (IHMT), Universidade NOVA de Lisboa (UNL) and the Association of Students and Friends of the IHMT (AAAIHMT) – 3rd National Congress of Tropical Medicine and 1st Congress of Diseases Transmitted by Vectors, Lisbon, Portugal.</p>
2010	<p>EPIET Alumni Network (EAN) Presidents’ Prize attributed to the “Best Poster” presentation (<i>ex aequo</i>). Poster entitled <i>“Lyme Borreliosis versus <u>Borrelia</u> genospecies in Portugal”</i> - Marta-Fernandes F, [...] <b>Vieira, ML.</b></p>	<p>ECDC (ESCAIDE) - European Centre for Disease Prevention and Control (European Scientific Conference on Applied Infectious Disease Epidemiology), Lisbon, Portugal.</p>

## 7. TEACHING ACTIVITIES AT POSGRADUATE LEVEL

### 7.1 SCIENTIFIC COMMITTEES (2<sup>nd</sup> Cycle)

Member of the Scientific Committee of the Master's Degree in Biomedical Sciences since the 5th edition (2010-2012) to the present



## **7.2 TUTORIAL COMMITTEES (3rd Cycle)**

Member of Tutorial Committees of diverse PhD students in Biomedical Sciences, (Microbiology):

## **7.3 COORDINATION OF CURRICULAR UNITS (2<sup>nd</sup> and 3<sup>rd</sup> Cycle)**

Coordinator since the academic year 2007-2008 some Curricular Units (UCs) of the 2nd cycle and 3rd cycle - Masters of Biomedical Sciences and Medical Microbiology and Doctorate of Biomedical Sciences (Microbiology specialty), respectively:

- UC of Safety and Laboratory Manipulation;
- UC Medical importance of zoonotic spirochetes: *Leptospira* and *Borrelia*;
- UC Zoonotic Spirochetes: Leptospirosis and Lyme Borreliosis (until 2017).

## **7.4 REGULAR TEACHING ACTIVITY**

Participation in the teaching of IHMT since 1999, initially at the level of support in the laboratorial approaches of the courses, and after 2006 (year of personal doctoral degree), in the lectures and practical lessons of the mentioned courses, in particularly in their areas of scientific and technical competence and others, such as the UC of Safety and Laboratory Manipulation and Quality Control.

Participation in the teaching of components of their area in several Curricular Units in the Masters in Biomedical Sciences, Tropical Health, Medical Microbiology and Medical Parasitology, and in the Doctoral Courses of Human Genetics and Infectious Diseases, Biomedical Sciences and Tropical Diseases and Global Health.

## **7.5 OTHER POST GRADUATE TRAINING ACTIVITIES AND SPECIALIZATION COURSES**

2014 - Participation in the Course on Tropical Diseases for Military Doctors - Luanda, Angola - coordinated by Prof. Doctor Jorge Seixas, with a lecture on Leptospirosis, by teleconference.

2016 - Participation in the Master's Degree in Tropical Health / Doctoral Course in Tropical Medicine – Universidade Estadual do Sudoeste da Baía, Vitória da Conquista, Brazil, with lectures by teleconference:

- Leptospirosis - New Diagnostic Approaches;
- Borreliosis and Lyme - from the Agent to the Diagnosis.

## 8. SUPERVISION EXPERIENCE

### 8.1 DOCTORAL THESES

#### 2016

- MÓNICA SUSANA CLAUDINO NUNES - Thesis title (EN). "Unraveling of *Borrelia burgdorferi* s.l. genospecies diversity and infected capacity in Portugal towards the development of more efficient diagnostic tools for Lyme disease".

Start:: June' 2012

Funded by a grant of the Foundation for Science and Technology (FCT), Ref.ª SFRH / BD / 78325/2011.

Supervisor: **Maria Luísa Vieira**

Co-supervisors: António Paulo Almeida and João Inácio Silva

[*Currently, Mónica Nunes pos-doc fellowship at IBET*]

- ELSA MARIA DOS VIVEIROS FORTES-GABRIEL de Luanda, Angola – Título da Tese (PT/EN). "Leptospirose em Angola: estudo ser-epidemiológico em pacientes febris com suspeita de Malária e identificação de *Leptospira* spp em reservatórios silváticos" / "Leptospirosis in Angola: epidemiological study in febrile patients with suspected malaria and *Leptospira* spp identification in sylvatic reservoirs"

Start: 2011

Funded by a grant of the Foundation Calouste Gulbenkian (FCG) no âmbito do apoio aos Países de Língua Oficial Portuguesa (PALOP).

Supervisor: **Maria Luísa Vieira**

[*Currently, Elsa Gabriel has returned to Angola (Luanda) and collaborates in the teaching at the Faculty of Medicine, Agostinho Neto University, in Luanda*].

#### 2010

- DANIELA DIB GONÇALVES REPETTI, Curso Doutoral em Ciência Animal, da Universidade de Londrina (UEL) - Paraná - Brazil – Título da Tese (PT): "Zoonoses (Leptospirose e Borreliose de Lyme) numa área rural do município de Jataizinho – Paraná - Brasil" / "Zoonoses (Leptospirosis and Lyme Borreliosis) in a rural area of the municipality of Jataizinho - Parana - Brazil". Thesis Project for a CAPES Scholarship for the work developed at IHMT, UNL (Portugal).

Co supervisor - **Maria Luísa Vieira**

[*Currently Daniela Dib is a Professor at the Paraná University (UNIPAR), Parana, Brazil, in the area of zoonoses, and works particularly in vectors (ixodids) and Lyme Disease, maintaining a close collaboration with the Medical Microbiology Unit IHMT, UNL, Lisbon, Portugal*].

## 7.2 MASTER DISSERTATIONS

### 2017

- SALIMA AMIRALI JAMAL – Master in Tropical Health from the Universidade NOVA de Lisboa (Institute of Hygiene and Tropical Medicine, IHMT). Dissertation title (PT/EN): "Infeção por *Borrelia burgdorferi* sensu lato. Estudo em indivíduos assintomáticos" / "Infection with *Borrelia burgdorferi* sensu lato. Study in asymptomatic individuals".

Supervisor - Rosa Teodósio

Co-Supervisor - **Maria Luísa Vieira**

- CÁTIA SEMEDO PATRÍCIO – Master in Biomedical Sciences from the Universidade NOVA de Lisboa (Institute of Hygiene and Tropical Medicine, IHMT). Dissertation title (PT/EN): "*Borrelia burgdorferi* sensu lato em animais assintomáticos" / "*Borrelia burgdorferi* sensu lato in asymptomatic animals".

Supervisor - Ana Amaro (INIAV)

Co-Supervisor - **Maria Luísa Vieira**

- MARISA LOPES – Master in Biomedical Sciences from the Universidade NOVA de Lisboa (Institute of Hygiene and Tropical Medicine, IHMT). Dissertation title (PT/EN): "Avaliação da atividade citotóxica e antimicrobiana de plantas do Cerrado brasileiro sobre espiroquetas do complexo *Borrelia burgdorferi* sensu lato" / "Evaluation of cytotoxic and antimicrobial activity of plants of the Brazilian Cerrado, on spirochetes of *Borrelia burgdorferi* sensu lato complex".

Supervisor - **Maria Luísa Vieira**

Co-Supervisor - Yanna Nóbrega (University of Brasília, Brazil)

- MARIA DO ROSÁRIO CAMPOS OLIVEIRA FERNANDES – Master in Tropical Health from the Universidade NOVA de Lisboa (Institute of Hygiene and Tropical Medicine, IHMT). Dissertation title (PT/EN): "Pesquisa de anticorpos anti-*Leptospira interrogans* em trabalhadores de Saneamento Básico da Região de Lisboa e Vale do Tejo" / "Search anti-*Leptospira interrogans* antibodies in Basic Sanitation workers from Lisbon and Tagus Valley Region".

Orientadora - Rosa Teodósio

Co-orientadora - **Maria Luísa Vieira**

### 2015-2016

- ISAC PAPOSSECO COMIA from Nampula, Mozambique - Master in Biomedical Sciences and International Health, from the Universidade de Lúrio (Faculty of Sciences of Health), Nampula, Mozambique. Dissertation title (PT/EN): "Espécies Biológicas do

género *Rattus*, potenciais transmissores de *Leptospira* spp e Fatores de Risco associados a doença (Leptospirose) na Ilha de Mocambique, 2015” / “Biological Species of the genus *Rattus*, capable of transmitting *Leptospira* spp and risk factors associated with disease (leptospirosis) in Mozambique Island, in 2015”.

Supervisor - **Maria Luísa Vieira**

- ADRIANA MANUELA SARDIÑA ALDEIA, from Venezuela – Master in Medical Microbiology from Universidade NOVA de Lisboa (Institute of Hygiene and Tropical Medicine, IHMT) – Dissertation Title (PT/EN): “Pesquisa e identificação de bactérias do Género *Leptospira* em coleções de água doce através de técnicas moleculares” / "Research and bacterial identification of *Leptospira* Genus in freshwater collections through molecular techniques".

Supervisor - **Maria Luísa Vieira**

- MARTA MARIA ALMEIDA DIAS DO NASCIMENTO - Master in Medical Microbiology from Universidade NOVA de Lisboa (Institute of Hygiene and Tropical Medicine, IHMT) – Dissertation Title (PT/EN): “Desenvolvimento e otimização da técnica LAMP (Loop-Mediated Isothermal DNA Amplification) para a identificação das principais genoespécies do complexo *Borrelia burgdorferi* sensu lato” / "Development and optimization of technical LAMP (Loop-Mediated Isothermal Amplification DNA) to identify the major genospecies of *Borrelia burgdorferi* sensu lato complex".

Supervisor - **Maria Luísa Vieira**

## 2014

- BALTAZAR CÁ, from Guinea-Bissau – Master in Tropical Health from Universidade NOVA de Lisboa (Institute of Hygiene and Tropical Medicine, IHMT) – Dissertation Title (PT/EN): "Importância Epidemiológica dos Roedores como Reservatórios de *Leptospira* spp. na Cidade de Bissau (Guiné-Bissau) e áreas limítrofes" / "Epidemiological Importance of Rodents as *Leptospira* reservoirs spp. In the city of Bissau (Guinea-Bissau) and neighboring areas"

Supervisor - **Maria Luísa Vieira**

*[Currently, Baltazar Cá is a Fellow of a PhD Program (PGCD) organized by the Gulbenkian Institute of Science (IGC), Oeiras, Portugal]*

- ELSA GRACIANA ESTANISLAU NDEYANELAO, from Huila, Angola - Master in Biomedical Sciences from Universidade NOVA de Lisboa (Institute of Hygiene and Tropical Medicine, IHMT), - Dissertation Title (PT/EN): "Seroprevalência da Leptospirose humana na Província da Huila: Rastreio serológico de doentes / utentes assistidos no Hospital Central Dr. António Agostinho Neto, Lubango (Angola)" / "Seroprevalence of human leptospirosis in Huila Province: HIV Screening of patients / users assisted in the Central Hospital Dr. António Agostinho Neto, Lubango (Angola)".

Supervisor - **Maria Luísa Vieira**

*[Currently, Elsa Estanislau is a researcher at the Central Hospital Dr. António Agostinho Neto, Lubango, Huíla (Angola).*

### 2013

- NÁDIA TERESA COELHO LOPES – Master in Medical Microbiology from Universidade NOVA de Lisboa (Faculty of Sciences and Technology, FCT) – Dissertation Title (PT/EN): "Contribuição para a deteção de genosespécies do complexo *Borrelia burgdorferi* s.l. circulantes em Portugal: aplicação de PCR em tempo real versus PCR convencional" / "Contribution to Gene Detection complex species *Borrelia burgdorferi* s.l. circulating in Portugal: application of real-time PCR versus conventional PCR"

Supervisor - **Maria Luísa Vieira**

*[Currently Nadia Lopes has a position of Lab Technician at the District Hospital of Santarém]*

- ANA SOFIA ANDRADE FARIA – Master in Biotechnology from Universidade de Trás-os-Montes e Alto Douro (UTAD) – Dissertation Title (EN/PT): "Detection of *Borrelia burgdorferi* sensu lato DNA in serum and parasiting ixodids of the wild boar (*Sus scrofa*) in northern Portugal by nested-PCR" / "Deteção de DNA de *Borrelia burgdorferi* sensu lato por nested PCR no soro de javalis (*Sus scrofa*) parasitados por ixodídeos no nordeste de Portugal".

Supervisor - Maria das Neves Cardoso (UTAD)

Co-Supervisor - **Maria Luísa Vieira**

*[Currently Sofia Faria is a PhD student at UTAD].*

- VANESSA AZEVEDO - Master in Biomedical Sciences from Universidade NOVA de Lisboa (Institute of Hygiene and Tropical Medicine, - Dissertation Title (PT/EN): "Fasciolose e Leptospirose: interações imunológicas no polimorfismo do quadro clínico de doentes de São Miguel (Açores)" / "Fasciolosis and Leptospirosis: immunological changes in the polymorphism of the clinical picture of São Miguel patients (Azores)".

Supervisor- **Maria Luísa Vieira**

Co-Supervisor – Ana Afonso

### 2012

- JOANA VANESSA GARCIA – Master in Tropical Health from Universidade NOVA de Lisboa (Institute of Hygiene and Tropical Medicine, IHMT) – Dissertation Title (PT/EN): "Contribuição para o conhecimento da leptospirose humana na região do Lobito (Angola): aplicação de métodos de diagnóstico serológico e/ou molecular" / "Contribution to the knowledge of human leptospirosis in the region of Lobito (Angola): application of methods of serological diagnosis and / or molecular".

Supervisor - **Maria Luísa Vieira**

## 2009

- TERESA MARGARIDA QUARESMA CARREIRA – Master in Biotechnology from Universidade NOVA de Lisboa (Faculty of Sciences and Technology, FCT), - Dissertation Title (PT/EN): "Implementação de métodos moleculares para o diagnóstico precoce de leptospirose humana" / "Implementation of molecular methods for early diagnosis of human leptospirosis."

Supervisor - **Maria Luísa Vieira**

*[Teresa Carreira is a Laboratory Technician (Principal Technician) at the Laboratory of Leptospirosis and Lyme Borreliosis, linked to the Medical Microbiology Unit, Institute of Hygiene and Tropical Medicine / Universidade NOVA de Lisboa (IHMT / UNL).*

- MARTA FILIPA FERNANDES – Master in Applied Microbiology, from Universidade de Lisboa (Faculty of Sciences) – Dissertation Title (PT/EN): "Borreliose de Lyme: (novos) aspetos da infeção humana" / "Lyme borreliosis: (new) human infection aspects".

Supervisor - **Maria Luísa Vieira**

## 7.3 MASTER DISSERTATION (*ongoing*)

### 2016-2017:

- Supervisor of FILIPA LEAL DE OLIVEIRA GERALDO DIAS – Master of Medical Microbiology from Universidade NOVA de Lisboa (Institute of Hygiene and Tropical Medicine). Dissertation Title (PT/EN): "Avaliação laboratorial da citocina CXCL13 como biomarcador para Neuroborreliose de Lyme (NBL) e/ou Esclerose Múltipla (EM)" / "Laboratory evaluation of cytokine CXCL13 as a biomarker for Lyme Neuroborreliosis (NBL) and / or Multiple Sclerosis (MS)".

*[Waiting for public examinations – june' 2018]*

## 9. PUBLICATIONS

### 9.1 THESES / DISSERTATIONS

**Vieira ML. 2006.** Aspetos da caracterização antigénica e molecular da Leptospirose em áreas endémicas / Aspects of the antigenic and molecular characterization of Leptospirosis in endemic areas. Doctoral Thesis, Universidade Nova de Lisboa, Institute of Hygiene and Tropical Medicine, Lisbon, 314 pp.

Available in: <http://hdl.handle.net/10362/4812>

**Vieira ML. 1997.** Contribuição para o conhecimento da Fauna Ixodideológica das Ilhas de São Miguel, Terceira e Pico (Açores) / Contribution to the knowledge of the Ixodideological Fauna of the São Miguel, Terceira and Pico Islands (Azores). Master Dissertation, Universidade Nova de Lisboa, Institute of Hygiene and Tropical Medicine. Lisbon, 220 pp.

*Available at the IHMT Library in digital media and paper.*

**Vieira ML. 1988.** *Teucrium abutiloides*, trichomes secreting: morphology and secretion. Degree Monograph, from Universidade de Lisboa, Faculty of Sciences. Lisbon, 98 pp.

## 9.2 BOOK CHAPTERS

Rita Castro, Sofia Núncio, **Maria Luísa Vieira**. 2014. "Treponema, Borrelia e Leptospira" in Parte 4 - Bacteriologia Médica. Cap. 35: 444-466. Microbiologia Médica, vol. 1. Meliço-Silvestre A, Barroso H & Nuno Taveira editores, Lidel, Edições Técnicas, Lisboa, Portugal.

Marta Martins, Rita Castro, **Maria Luísa Vieira**. 2014. "Métodos de Diagnóstico Serológico" in Parte 3 - Princípios do Diagnóstico Microbiológico Médico. Cap 16: 170-181. Microbiologia Médica vol. 1. Meliço-Silvestre A, Barroso H & Nuno Taveira editores, Lidel, Edições Técnicas, Lisboa, Portugal.

Castro R, J Borges da Costa, I Couto, **M L Vieira**, M Viveiros. 2012). "Infeções bacterianas negligenciadas, esquecidas ou desconhecidas? A tradição exótica do IHMT." In: "Doenças da Pobreza, Negligenciadas e Emergentes". Anais do Instituto de Higiene e Medicina Tropical – Edição Comemorativa. Instituto de Higiene e Medicina Tropical da Universidade Nova de Lisboa (ed.). Vol. 11, 2012, Pages: 60-65. ISSN: 0303-7762.

Disponível em:

[http://www.ihmt.unl.pt/Biblioteca/Anais/HTMLS/Vol11\\_2012/files/assets/basic-html/page64.html](http://www.ihmt.unl.pt/Biblioteca/Anais/HTMLS/Vol11_2012/files/assets/basic-html/page64.html)

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Fortes-Gabriel EMV, Carreira TM, **Vieira ML**. 2013. First isolates of *Leptospira interrogans* from rodents and leptospirosis seroprevalence of human patients with malaria symptoms in Luanda and Huambo provinces (Angola). 8th European Congress of Tropical Medicine and International Health (Copenhagen, 12 -16 Sep' 2013).

[OC 1st author]

Fortes-Gabriel EMV, Carreira T, **Vieira ML**. 2013. Leptospirose ou Malária? Mini-Jornadas sobre Doenças Tropicais e Grandes Endemias. Luanda, Angola, 11-14 junho.

[OC 1st autor]

## 10.2 COMMUNICATIONS IN POSTER (last 5 years)

**Maria Luísa Vieira**, Salima Amirali Jamal, Teresa Carreira, Rosa Teodósio. 2017. *Borrelia burgdorferi* sensu lato in asymptomatic individuals: a preliminary study. MicroBiotec '17, Portuguese Congress of Microbiology and Biotechnology, Universidade Católica Portuguesa, Porto, Portugal, 7th- 9th Dec' 2017.

Filipa Geraldo-Dias, Teresa Carreira, **Maria Luísa Vieira**. 2017. *Borrelia burgdorferi* sensu lato in asymptomatic individuals: a preliminary study. MicroBiotec '17, Portuguese Congress of Microbiology and Biotechnology, Universidade Católica Portuguesa, Porto, Portugal, 7th- 9th Dec' 2017.

Faria AS, **Vieira ML**, Cabral JA, Nunes N, Carreira T, Nunes-Pereira M.Paiva-Cardoso, MdN. 2017. Serological findings of *Borrelia burgdorferi* sensu lato in wild boars of the Trás-os-Montes region: preliminary results. Xth International Symposium on Wild Fauna (ISOWiF). Universidade de Trás-os-Montes e Alto Douro (UTAD), 22-23 setembro, Vila Real.



Fernandes M, Carreira T, **Vieira ML**, Teodósio R. 2017. Pesquisa de anticorpos anti-*Leptospira interrogans* em trabalhadores do saneamento básico da região de Lisboa e Vale do Tejo. 4º Congresso Nacional de Medicina Tropical e 1º Encontro Lusófono de Sida, Tuberculose e Doenças Oportunistas, 19 a 21 de abril, IHMT, Lisboa. 2017, em Lisboa.

*\*Presented by last author*

Faria AS, **Vieira ML**, Carreira T, Nunes M, Nunes-Pereira M, Caipira-Lei M, Chaves S, Sousa M, Ventura AS, Cabral JA, Paiva-Cardoso MdN. 2017. "Rastreamento de anticorpos anti-*Borrelia burgdorferi* sensu lato por Imunofluorescência Indireta em javalis abatidos no distrito de Vila Real". II Forum Ciências Biológicas, Universidade de Trás-os-Montes e Alto Douro (UTAD), 22 - 24 fevereiro, Vila Real.

Faria AS, **Vieira ML**, Carreira T, Nunes M, Nunes-Pereira M, Cabral JA e Paiva-Cardoso MdN. 2016. "Estudo preliminar da ocorrência de anticorpos anti-*Borrelia burgdorferi* sensu lato em javalis abatidos em montaria nos distritos de Vila Real e Bragança". 7ª Edição EFOMV (Encontro de Formação da Ordem dos Médicos Veterinários), Centro de Congressos de Lisboa. 26 e 27 de novembro, Lisboa.

Carreira T, Nunes M, **Vieira ML**. 2016. "Borreliose de Lyme em Portugal: estudo retrospectivo de 10 anos (2006-2015)". Nova Saúde – II Workshop UNL/INSA – Doenças Transmitidas por Vetores, IHMT/UNL. 19 outubro, Lisboa.

Nunes M, Parreira R, Carreira T, **Vieira ML**. 2016. "Identification of Relapsing Fever *Borrelia* in hard ticks from Portugal". E-SOVE – 20th European Society for Vector Ecology Conference, Faculdade de Medicina Veterinária, Universidade de Lisboa. 3 a 7 outubro, Lisboa.

Nunes M, Carreira T, Inácio J, **Vieira ML**. 2016. "Development of a TaqMan® Real-time PCR Algorithm for *Borrelia burgdorferi* sensu lato Genospecies Identification". Ciência 2016 - Encontro com a Ciência e Tecnologia em Portugal, Centro de Congressos de Lisboa. 4 a 6 de julho, Lisboa.

Elsa Fortes-Gabriel, Teresa Carreira, **Maria Luísa Vieira**. 2015. Leptospirosis in Angola: seroepidemiological study among malaria suspected patients. MicroBiotec '15, Portuguese Congress of Microbiology and Biotechnology, Universidade de Évora, Évora, Portugal, 10th- 12th Dec' 2015.

**NOTE: Attributed the Award for "Best Poster".**

Teresa Carreira, Adriana Aldeia, Mónica Nunes, **Maria Luísa Vieira**. 2015. Molecular identification of *Leptospira* spp found in freshwater collections in the Leiria district, Portugal. MicroBiotec '15, Portuguese Congress of Microbiology and Biotechnology, Universidade de Évora, Évora, Portugal, 10th- 12th Dec' 2015.

Mónica Nunes, Ricardo Parreira, Nádia Lopes, Teresa Carreira, **Maria Luísa Vieira**. 2015. Molecular Identification of a Tick-borne Relapsing Fever – like *Borrelia* sp. Infecting ixodids (hard-bodied ticks) from Portugal. MicroBiotec '15, Portuguese Congress of

Microbiology and Biotechnology, Universidade de Évora, Évora, Portugal, 10th- 12th Dec' 2015.

Nunes M, Carreira T, Inácio J, **Vieira ML**. 2015. Development of a Quadruplex Real-Time PCR for *Borrelia burgdorferi* sensu lato Species Identification. 14th International Conference on Lyme Borreliosis and other Tick-Borne Diseases September 27-30, Vienna, Austria.

Faria AS, Paiva-Cardoso MdN, Nunes M, Carreira T, Vale-Gonçalves HM, Veloso O, Coelho C, Cabral JA, Vieira-Pinto M, **Vieira ML**. 2015. First detection of *Borrelia burgdorferi* sensu lato DNA in hunted wild boars. 3º Congresso Nacional de Medicina Tropical e 1º Congresso Lusófono de Doenças transmitidas por Vetores. IHMT, UNL, 20 e 21 abril ' 2015.

**NOTE: awarded an Honorable Mention**

Nunes M, Maia C, Carreira T, Almeida AP, Campino L, **Vieira ML**. 2015. Doença de Lyme no sul de Portugal: avaliação da relação entre hospedeiros domésticos (caninos e felinos) e vetor. 3º Congresso Nacional de Medicina Tropical e 1º Congresso Lusófono de Doenças transmitidas por Vetores. IHMT, UNL, 20 e 21 abril ' 2015.

Aldeia A, Carreira T, **Vieira ML**. 2015. Identificação molecular de bactérias do género *Leptospira* em coleções de água doce no Distrito de Leiria. 3º Congresso Nacional de Medicina Tropical e 1º Congresso Lusófono de Doenças transmitidas por Vetores. IHMT, UNL, 20 e 21 abril ' 2015.

Carreira T, Nunes M, **Vieira ML**. 2015. Human Leptospirosis in Portugal: a retrospective study of ten years (2004-2013). 2nd ELS meeting on leptospirosis and other rodent-borne haemorrhagic fevers. Royal Tropical Institute (KIT), Amsterdam, The Netherlands, 16 - 18 April' 2015.

Vale-Gonçalves HM, Cabral JA, Faria MC, Nunes-Pereira M, Faria AS, Veloso O, Carreira T, **Vieira ML**, Paiva-Cardoso MdN. 2015. *Leptospira* antibodies in wild boars (*Sus scrofa*) from Northern Portugal: risk factor analysis. Royal Tropical Institute (KIT), Amsterdam, The Netherlands, 16 - 18 April' 2015.

Amaro A, Nunes M, Gomes J, Leão C, Inácio J, **Vieira ML**. 2015. Molecular Investigation of *Borrelia burgdorferi* sensu lato in Serum of several Animal species from Mainland Portugal. The 2nd Conference on Neglected Vectors and Vector-Borne Diseases with MC and WG Meetings of the COST Action TD 1303. Izmir, Turkey, March 31 - April' 2 '2015.

Fortes-Gabriel EMV, Carreira T, **Vieira ML**. 2014. Caracterização fenotípica e genotípica dos isolados de *Leptospira* spp de roedores capturados em Angola. V Jornadas Científicas do IHMT, UNL. Lisboa, 12 dezembro 2014.

Duarte Rocha S, Marques N, **Vieira ML**, Ferreira E, Saraiva da Cunha J. 2014. Meningites por *Leptospira*: 13 anos de casuística, ainda um desafio diagnóstico. X Congresso Nacional

VIH/SIDA e XII Congresso Nacional de Doenças Infeciosas e Microbiologia Clínica. Universidade Católica Portuguesa, Lisboa, 1 a 3 dez '2014.

Duarte Rocha S, Marques N, **Vieira ML**, Ferreira E, Saraiva da Cunha J. 2014. Leptospirose, a clínica e o Dilema serológico. X Congresso Nacional VIH/SIDA e XII Congresso Nacional de Doenças Infeciosas e Microbiologia Clínica. Universidade Católica Portuguesa, Lisboa, 1 a 3 dez '2014.

M Nunes, N Lopes, T Carreira, C Maia, APG Almeida, **ML Vieira**. 2014. First molecular detection of human relapsing fever spirochete *Borrelia miyamotoi* in *Ixodes ricinus* from Portugal. International Meeting on Emerging Diseases and Surveillance (IMED). Vienna, Austria, Oct 31 - Nov 3 '2014.

Nunes M, Lopes L, Maia C, Carreira T, Inácio J, **Vieira ML**. 2014. Presence of Lyme disease agents in the Portuguese ixodofauna: development of real-time PCR assays for the identification of *Borrelia burgdorferi* genospecies. 24th European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Barcelona, Spain, 10-13 May 2014. [eposter]

Carreira T, Estanislau E, Cá B, Fortes-Gabriel E, Garcia J, Nunes M, **Vieira ML**. 2014. Leptospire and leptospirosis in Angola and Guinea-Bissau: the involvement of a European laboratory for research and diagnosis. 4th European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Barcelona, Spain, 10-13 May 2014.

Nunes M, Lopes N, Inácio J, **Vieira ML**. 2013. Development of real-time PCR assays targeting the flagellin gene for the identification of *Borrelia burgdorferi* sensu lato genospecies. MicroBiotec '13, Portuguese Congress of Microbiology and Biotechnology, University of Aveiro, Portugal, 6th- 8th Dec' 2013.

Estanislau E, Carreira T, **Vieira ML**. 2013. Seroprevalence of human leptospirosis in the province of Huila (Angola). MicroBiotec '13, Portuguese Congress of Microbiology and Biotechnology, University of Aveiro, Portugal, 6th- 8th Dec' 2013.

Lopes N, Nunes M, Almeida P, **Vieira ML**. 2013. Warning: Ticks alert!!! Find out what ticks surround us, and their relationship with Lyme Borreliosis. MicroBiotec '13, Portuguese Congress of Microbiology and Biotechnology, University of Aveiro, Portugal, 6th- 8th Dec' 2013.

Faria AS, Paiva-Cardoso MN, Nunes MS, Carreira T, Vale-Gonçalves H, Veloso O, Coelho C, Cabral JÁ, Vieira-Pinto M, **Vieira ML**. 2013. Detecção de DNA de *Borrelia burgdorferi* sensu lato em soro de javali (*Sus scrofa*) no norte de Portugal por nested-PCR. III Jornadas de Saúde Pública, Universidade de Trás-os-Montes e Alto Douro, 2 nov' 2013, Vila Real.

Faria AS, Paiva-Cardoso MN, Nunes MS, Carreira T, Vale-Gonçalves H, Veloso O, Coelho C, Cabral, JÁ, Vieira-Pinto M, **Vieira ML**. 2013. Pesquisa de DNA de *Borrelia burgdorferi* sensu lato em Ixodídeos parasitas de javali (*Sus scrofa*) no norte de Portugal, por nested-

PCR. III Jornadas de Saúde Pública, Universidade de Trás-os-Montes e Alto Douro, 2 nov' 2013, Vila Real.

Vale-Gonçalves HM, Morinha F, Faria AS, Veloso O, Coelho C, Vieira-Pinto M, Cabral JÁ, Bastos E, **Vieira ML**, Paiva-Cardosos MN. 2013. Detecção de DNA leptospírico em javalis (*Sus scrofa* Linnaeus, 1758) na Região de Trás-os-Montes. III Jornadas de Saúde Pública, Universidade Trás-os-Montes e Alto Douro, 2 nov' 2013, Vila Real.

Fortes-Gabriel EMV, Carreira T, Vieira ML 2013. *Leptospira interrogans* s.l. em pacientes com síndrome febril suspeita de malária em Angola: uma nova abordagem diagnóstica. 2º Congresso Nacional de Medicina Tropical, 20-23 Maio, Lisboa, Portugal.

## 11. SERVICES TO THE COMMUNITY

Sept 2007 – responsible for one of the two reference laboratories (according to the WHO guidelines) for human leptospirosis in Portugal, and for the routine diagnosis since 2000, and Lyme Borreliosis since 2007. This Service to the Community covers a large part of the country hospitals in the continent (central Region, Lisbon and Tagus Valley, and South) and also the Autonomous Regions of the Azores Archipelago (islands of São Miguel, Terceira and Faial) and Madeira Archipelago.

## 12. COOPERATION ACTIVITIES WITH PORTUGUESE SPEAKING COUNTRIES

**Out '2010** - Participation in a "Training Action" in Cape Verde, materialized in a "Training and Qualification and Biosafety and Quality Control Course" in Microbiology Laboratories, for local Health Technicians, held at the University of Cape Verde (Cidade da Praia) and Hospital of the Sanitary Region of Santiago North".

*(Action funded by the Calouste Gulbenkian Foundation)*

- Since 2010, participation in cooperation activities in Portuguese Speaking Countries (PALOPs), through teaching/supervisor of students from **Angola** (work developed in the Provinces of **Luanda, Huambo, Benguela** and **Huíla**); in **Guinea-Bissau** (Bissau); and **Mozambique** (Maputo and Nampula).
- Similar cooperation is also present by the signatory within the **Community of Portuguese Speaking Countries (CPLP)**, particularly in **Brazil**, where a number of cooperation actions have been developed, namely in **Parana** and **Brasília**, materialized

by joint research, exchange experiences in the laboratory, and reciprocal participation in academic guidelines and student exchange.

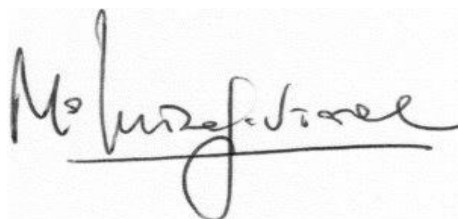
### 13 PAPER'S REVIEWER

- Parasite & Vectors
- Acta Tropica
- Tropical Medicine International Health
- Journal of Microbiology Research

### 14. PROFESSIONAL AND SCIENTIFIC MEMBERSHIP ASSOCIATIONS

- 1986/- Ordem dos Biólogos (OBio) – Portuguese Biologists Association
- 2012/- European Leptospirosis Society (ELS)
- 2010/- American Association for Clinical Chemistry (AACC)
- 2011/- European Society of Clinical Microbiology and Infectious Diseases (ESCMID)
- 2004/- Sociedade Portuguesa de Microbiologia (SPM) / Portuguese Microbiology
- 1996/- International Leptospirosis Society (ILS)
- 1995/- Sociedade Portuguesa de Parasitologia (SPP) /Portuguese Parasitology Society
- 1989/- Sociedade Portuguesa de Microscopia Eletrónica e Biologia Celular (SPME-BC) / Portuguese Society of Electron Microscopy and Cell Biology

Lisboa, abril/maio 2018



Maria Luísa Vieira