

CURRICULUM VITAE

Name: HENRIQUE Manuel Condinho da SILVEIRA

Date of birth: 28/04/1966

Marital status: Married, 2 daughters

Nationality: Portuguese

Institutional address: Global Health and Tropical Medicine, Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa. Rua da Junqueira 100, 1349-008 Lisboa Portugal

Tel: (+) 351-916800174

Fax: (+) 351 21 3632135

Email: hsilveira@ihmt.unl.pt

Academic degrees:

2008 "Agregação" in Medical Parasitology. **Instituto de Higiene e Medicina Tropical (IHMT), Universidade Nova de Lisboa (UNL), Portugal.**

1994 PhD in Parasitology. **Imperial College, University of London, UK.** Supported by "Programa Ciência - JNICT", Portugal

1989 Four-year degree in Biology. **Instituto de Ciências Biomédicas Abel Salazar (ICBAS), Universidade do Porto (UP), Portugal.**

Areas of activity:

Coordination and management activities: *I started my activities as IHMT deputy director for Scientific affairs since 2011, during that time I was responsible for restructuring the IHMT Training and Research Units (UEI) and the Project Support Office (GAP). Represented IHMT at International Association of National Public Health Institutes (IANPHI) and Network of National Public Health Institutes (RINSP) from CPLP (Community of Portuguese Speaking Countries) and participates in technical mission within the network. During that period was elected Scientific Coordinator of the Associate Laboratory – Centre for Malaria Studies (CMDT) of the Science Foundation (FCT), Ministry of Science and higher education, Portugal (2011/2015). Coordinated the PhD program on Biomedical Sciences, IHMT, UNL (2010/2015) and prepared an international PhD programme on Global and Tropical Health in collaboration with Fiorcuz, Brazil (to start 2015/16). During 2013/14, was responsible for the proposal of the new IHMT R&D Centre from the FCT – Global Health and Tropical Medicine (GHTM), which recently obtained the classification of excellent. I was appointed GHTM Scientific Coordinator from 2015 till 2017.*

Areas of research activity: *My group is centered on the mosquito response to the infection and how this response can be modulated by external factors. Our goal is to develop effective tools to prevent malaria transmission by Anopheles mosquitoes. We investigate the role and mechanism of action of molecules able to modulate mosquito response to parasite, increasing resistance to infection. The role of microbiota on the response to Plasmodium infection is also under investigation. We use murine malaria and Anopheles gambiae and Anopheles stephensi mosquitoes. Most recently a similar approach, but using mosquitoes collected in the field and experimentally infected with Plasmodium vivax is being developed at Fundação de Medicina Tropical Dr Heitor Vieira Dourado (FMT-HVD) Manaus, Brazil. At the FMT-HVD we also develop activities on the molecular characterization of Trypanosoma cruzi from the Amazon and its association with the eco-biology of vectors and other vertebrate hosts. Researcher ID: G-2229-2011 (<http://www.researcherid.com/rid/G-2229-2011>).*

Present position: Full Professor at IHMT, UNL since 2015

Previous positions:

- Associate Professor at IHMT, UNL (2012-2015)
- Assistant Professor, IHMT, UNL (2001-2012)
- Special Visiting Research (PVE) of the Brazilian program Science without borders at the Foundation of Tropical Medicine (FMT-HVD), Manaus, Brazil. (2013-2015)
- Visiting Researcher at the FMT-HVD, Manaus, Brazil. Supported by grant of the, Brazil. (2008-2009)
- Invited Assistant Professor at IHMT, UNL (1999-2001)
- Post-Doctoral Grant Praxis XXI (BPD/11781/97) at the CMDT/IHMT. (1997-1998)
- Research Fellow at the London School of Hygiene and Tropical Medicine, UK. (1996-1997)
- Post doctoral position in the EU funded project TS3-CT93-0245. (1994-1996)

Coordination activities:

- Appointed Scientific Coordinator of GHTM from 2015 till 2017
- Elected Scientific Coordinator of the Associate Laboratory – Centre for Malaria Studies (CMDT) of the Science Foundation, Ministry of Science and higher education, Portugal (2011-2013)
- Deputy Director from the IHMT, UNL (2011-2014 and 2015-till present)
- Coordinator of the PhD program on Biomedical Sciences, IHMT, UNL (2010/2015)
- Portuguese delegate to the managing comity of COST 857 – “Apicomplexan biology in the post-genomic era”
- Elected member of the Scientific Committee of the IHMT, UNL.
- Local organiser of the COST Action 857 - Apicomplexan Biology in the post-genomic era, 1st Annual Workshop, Lisbon, Portugal, 3-6/05/2004
- ICCTI delegate in the Workshop - Health and Quality of life, ALCUE (EU-Latin America & Caribbean S&T Cooperation), Rio de Janeiro 7/10-11-2001.
- Visit to several US Institutions, sponsored by the US International Agency - International visitor program Co-operation in fighting Infectious Disease” 13-24/09/1999.

Supervision of students: PhD students: 7; MSc students: 9; Graduation students: 8

Teaching

- Coordinator the “Molecular Parasitology” module from the MSc and PhD programmes on Biomedical Sciences, IHMT, UNL. (TropEd accredited course - (<http://www.troped.org>.)
- Teaches in several Curricular Units from PhD and MSc programs at IHMT.
- Teached/s in post graduate programs in Univ. Porto, several institutions in Brazil, Spain and Venezuela.

Organization of international courses (and teaching)

- Biotechnology Applied to Infectious and Parasitic Diseases. **Post-graduate programme FMTAM/UEA, Manaus, AM, Brazil** (annually - 2008 till 2011).
- **COST 857 Transfection workshop. Lisbon**, 19-22nd October 2008.
- Advances in Molecular and Cellular Biology. Post-graduate programme **RENORBIO, Teresina, PI, Brazil** (annually - 2008 till 2011).
- “Laboratory Animal Sciences” (equivalent to Cat C – FELASA), **IHMT, Lisboa**, 17-28/04/06. Co-organization with Dr. Olson A. (IBMC, University of Porto),
- “Methodologies of Research using molecular biology tools” National Institute of Health, **Luanda, Angola** 20-23/03/06.
- “Molecular tools applied to health and environmental studies”, Biotechnology Center and Veterinary School, University Eduardo Mondlane (CB and Vet Fac, UEM) **Maputo, Mozambique** 25-29/07/2005.
- “Principals of genetics and molecular biology applied to health” **INS, Luanda, Angola** 27-04/06/05.
- “Gene Silencing” **University of Algarve** 12-15/04/05.
- “Informatic tools applied to research in molecular biology”, Centro de Biotecnologia da Universidade Eduardo Mondlane, **Maputo, Mozambique** 07– 10/06/2004 (co-organiser with Luis Neves, UEM, Mozambique and Sonia Centeno-Lima, CMDT, Portugal).

Training/Research abroad

- Spend extended periods for research or training in: ICGEB, New Delhi, India; Veterinary Pathobiology Department, University of Minnesota, USA; Unité D’Immunochimie Analytique, Institut Pasteur, Paris, France; Instituto de Inmunologia del Valle, Universidad del Valle, Cali, Colombia; and Instituto de Ciências Biomédicas, USP, São Paulo, Brazil.

Financed projects as PI

- Resposta à infecção por *Plasmodium* em mosquitos do novo mundo. (FAPEAM, AM, Brazil - ref 19716.UNI472.2459.20022014)

- Incentivo LA18 – 2014- incentivo/SAU/LA0018/2013 (2014)
- Incentivo LA18 – 2013- incentivo/SAU/LA0018/2013 (2013)
- Projeto Estratégico - LA 18 2013/2014 - PEst-OE/SAU/LA0018/2013 (2013-14)
- Projeto Estratégico - LA 18 2011/2012 - PEst-OE/SAU/LA0018/2011 (2011-12)
- Immune stimulation of the mosquito *Anopheles gambiae* response against the malaria parasite *Plasmodium berghei* PTDC/SAU-MII/102596/2008 (2010-2014)
- Gene variability of pattern-recognition-molecules (PRM) involved in mosquito immune response to *Plasmodium* POCI/SAU-IMI/59489/2004 (2005-2009)
- The effect of chloroquine on the modulation of mosquito vector response to *Plasmodium* infection. ref POCTI/MGI/344905/2002 (2003-2006)
- Studies on the effect of specific anti-Plasmodia antibodies on the development of the parasite and gene expression in the mosquito vector, ref. POCTI/ESP/43636/99 (2001-2003)
- *Plasmodium* gene expression during the sporogonic development in the mosquito vector: effect of specific antibodies and antimalarial drugs. ref. POCTI/MGI/35815/00 (2001-2004)
- Immunophysio-pathologie du paludisme placentaire humain: comparaison des répertoires des lymphocytes T circulants et placentaires. Acordo bilateral ICCTI/CNRS proc. 423. (2000-2001)
- Study of IL 6, 10 and 12 on *Plasmodium* and *Leishmania* infections (PBICT/BIA/2054/95). (1996)

Also participated as team member in over 15 competitively funded projects.

Reviewer activities:

- Activities related to the Network of the National Health Institutes from Portuguese Speaking Countries (RINSP/CPLP) namely Technical Missions for the preparation of the strategic plan of the future National Institutes of Health of São Tomé and Príncipe.
- Member of the External evaluation Commission of the FMT-HVP, Manaus (2013)
- Evaluator of STSM grants from COST Action 857 - Apicomplexan Biology in the post-genomic era (2004/09).
- Member of the scientific expert evaluators panel, Life Science, Marie Curie European Fellowships (2004 - 2006).
- Member of the scientific expert evaluators panel under the INCO specific measures for the call FP6-2004-INCO-DEV-3 (2005).
- Scientific Revision of manuscripts for BMC Genomics; Malaria Research and Treatment; Tropical Medicine and International Health; Infection, Genetics and Evolution, Book proposal review for Elsevier/Academic Press.
- Member of PhD and Msc examination panels (in Portugal and Brasil)
- Member of several evaluation panels for IHMT PhD/Research student selection and Selection committee of the Post-graduate programme of Infectious and Parasitic Diseases, FMT-HVP e UEA, Manaus, Brazil.
- Member of PhD and Msc examination panels (in Portugal and Brazil)
- Student selection committee of the Post-graduate programme UEA, FMT-HVP, Manaus
- Member of the External evaluation Commission of the FMT-HVP, Manaus (1-3/08/2013)

Publications in international peer-reviewed journals (2010-present):

- Felix RC, Trindade M, Pires IR, Fonseca VG, Martins RS, **Silveira H**, Power DM, Cardoso JC. 2015. Unravelling the evolution of the allatostatin-type A, KISS and galanin peptide-receptor gene families in Bilaterians: Insights from *Anopheles* mosquitoes. PLoS One. 10(7):e0130347.
- Simões ML, Gonçalves L, **Silveira H**. 2015. Hemozoin activates the innate immune system and reduces *Plasmodium berghei* infection in *Anopheles gambiae*. Parasit Vector. 8:12
- Barbosa Md, Ferreira JM, Arcanjo AR, Santana RA, Magalhães LK, Magalhães LK, Mota DT, Fé NF, Monteiro WM, **Silveira H**, Guerra JA. 2015. Chagas disease in the State of Amazonas: history, epidemiological evolution, risks of endemicity and future perspectives. Rev Soc Bras Med Trop. 48 Suppl 1:27-33.
- Yilmaz B, Portugal S, Tran TM, Gozzelino R, Ramos S, Gomes J, Regalado A, Cowan PJ, d'Apice AJF, Chong AS, Doumbo OK, Traore B, Crompton PD, **Silveira H**, Soares MP. 2014. Gut Microbiota Elicits a Protective Immune Response Against Malaria Transmission. Cell 159:1277-89.

- Costa M, Pinheiro-Silva R, Antunes S, Moreno-Cid JA, Custódio A, Villar M, **Silveira H**, de la Fuente J, Domingos A. 2014. Mosquito Akirin as a potential antigen for malaria control. *Malaria Journal* 13:470.
- Ramos S, Custódio A, **Silveira H**. 2014. *Anopheles gambiae* eicosanoids modulate *Plasmodium berghei* survival from oocyst to salivary gland invasion. *Mem Inst Oswaldo Cruz* 109:668.
- Santana RA, Magalhães LK, Magalhães LK, Prestes SR, Maciel MG, da Silva GA, Monteiro WM, de Brito FR, de Aguiar Raposo Câmara Coelho LI, Barbosa-Ferreira JM, Guerra JA, **Silveira H**, das Graças Vale Barbosa M. 2014. *Trypanosoma cruzi* strain TcI is associated with chronic Chagas disease in the Brazilian Amazon. *Parasit Vectors*. 7:267.
- Marques MM, Costa MR, Santana Filho FS, Vieira JL, Nascimento MT, Brasil LW, Nogueira F, **Silveira H**, Reyes-Lecca RC, Monteiro WM, Lacerda MV, Alecrim MG. 2014. *Plasmodium vivax* Chloroquine Resistance and Anemia in the Western Brazilian Amazon. *Antimicrob Agents Chemother*. 58:342-7.
- Armada A, Gazarini ML, Gonçalves LM, Antunes S, Custódio A, Rodrigues A, Almeida AJ, **Silveira H**, Rosário Vd, Santos-Gomes G, Domingos A. 2013. Generation of an antibody that recognizes *Plasmodium chabaudi* cysteine protease (chabaupain-1) in both sexual and asexual parasite life cycle and evaluation of chabaupain-1 vaccine potential. *Exp Parasitol*. 135(1):166-74.
- Chehuan YF, Costa MR, Costa JS, Alecrim MG, Nogueira F, **Silveira H**, Brasil LW, Melo GC, Monteiro WM, Lacerda MV. 2013. *In vitro* chloroquine resistance for *Plasmodium vivax* isolates from the Western Brazilian Amazon. *Malar J*. 12:226.
- Monteiro WM, Margioto Teston AP, Gruending AP, dos Reis D, Gomes ML, de Araújo SM, Bahia MT, Magalhães LKC, Guerra, JAO, **Silveira H**, Toledo MJO, Barbosa MG. 2013. *Trypanosoma cruzi* I and IV Stocks from Brazilian Amazon Are Divergent in Terms of Biological and Medical Properties in Mice. *PLoS Negl Trop Dis* 7(2): e2069.
- Silveira H**, Gabriel A, Ramos S, Palma J, Felix R, Custodio A, Collins V. 2012. CpG-containing oligodeoxynucleotides increases resistance of *Anopheles* mosquitoes to *Plasmodium* infection. *Insect Biochem Mol Biol* 42:758-765.
- Monteiro WM, Magalhães LKC, de Sá ARN, Gomes ML, Toledo MJdO, L, Pires I, Guerra JAO, **Silveira H**, Barbosa MG. 2012. *Trypanosoma cruzi* IV Causing Outbreaks of Acute Chagas Disease and Infections by Different Haplotypes in the Western Brazilian Amazonia. *PLoS ONE* 7: e41284.
- Monteiro WM, Magalhães LK, Oliveira JC, Guerra JA, **Silveira H**, Ferreira LC, Toledo MJ, Barbosa Md. 2012. Biological behavior of *Trypanosoma cruzi* stocks obtained from the State of Amazonas, Western Brazilian Amazon, in mice. *Rev Soc Bras Med Trop*. 45:209-14.
- Campos PA, Valente B, Campos RB, Goncalves L; do Rosario VE, Varandas L, **Silveira H**. 2011 Prevalence and risk factors of *Plasmodium falciparum* infection in pregnant women attending prenatal visits in Luanda. *Rev Soc Bras Med Trop*. 45:369-74.
- Félix RC, **Silveira H**. 2011. The Interplay between Tubulins and P450 Cytochromes during *Plasmodium berghei* Invasion of *Anopheles gambiae* Midgut. *PLoS ONE* 6: e24181.
- Valente B, Campos PA, do Rosário VE, **Silveira H**. 2011. Prevalence and risk factors of *Plasmodium falciparum* infections in pregnant women in Luanda, Angola. *Trop Med Int Health*. 16: 1206–1214.
- Guerra JA, Prestes SR, **Silveira H**, Coelho LI, Gama P, Moura A, Amato V, Barbosa MG, Ferreira LC. 2011. Mucosal Leishmaniasis caused by *Leishmania* (*Viannia*) *braziliensis* and *Leishmania* (*Viannia*) *guyanensis* in the Brazilian Amazon. *PLoS Negl Trop Dis*. 5(3):e980.
- Valente B, Campos PA, do Rosário VE, **Silveira H**. 2010. Natural frequency of polymorphisms linked to the Chondroitin 4-Sulfotransferase genes and its association with placental malaria. *Trans R Soc Trop Med Hyg*. 104:687-9.
- Monteiro WM, Magalhães LKC, Simões F, Medeiros, MB, **Silveira H**, Barbosa MG. 2010. *Trypanosoma cruzi* TCIII/Z3 genotype as agent of an outbreak of Chagas disease in the Brazilian Western Amazonia. *Trop Med Int Health*. 15:1049.
- Félix RC, Müller P, Ribeiro V, Ranson H, **Silveira H**. 2010. *Plasmodium* infection alters *Anopheles gambiae* detoxification gene expression. *BMC genomics*. 19;11(1):312.
- Mendes C, Felix R, Sousa AM, Lamego J, Charlwood D, do Rosario VE, Pinto J, **Silveira H**. 2010. Molecular evolution of the three short PGRPs of the malaria vectors *Anopheles gambiae* and *Anopheles arabiensis* in East Africa. *BMC Evol Biol*. 12;10(1):9.

July 2015