

## Curriculum Vitae – Helena Soares

<b>Current position</b>	Head of the Laboratory of Immunobiology and Pathogenesis (Investigador Auxiliar)
<b>Date from</b>	July 2015
<b>Location</b>	Chronic Diseases Research Centre (CEDOC), FCM

### PREVIOUS POSTS HELD

2014-2015	Invited Scientist, Instituto Gulbenkian de Ciência, Lisboa, Portugal
2011-2014	Research Associate Alcover Lab, Institut Pasteur, Paris, France
2008-2010	Postdoctoral Fellow Alcover Lab, Institut Pasteur, Paris, France
2007-2008	Postdoctoral Associate Steinman Lab, Rockefeller University, NYC, USA
2002-2006	Visiting Graduate Steinman Lab, Rockefeller University, NYC, USA

### QUALIFICATIONS

2006	Ph.D. in Biomedicine, Rockefeller University, NYC, USA
2002	Ph.D. course work, Instituto Gulbenkian de Ciência, Oeiras, Portugal
2001	Pharm.D., Faculdade de Farmácia, University of Coimbra, Portugal

### RESEARCH SUMMARY

Helena Soares performed her graduate work under the supervision of Ralph Steinman at Rockefeller University, in New York City. Her thesis aimed at manipulating the patient's immune response to cure disease, by investigating dendritic cells capacity to mobilize the immune system in a pathogen/cancer- specific manner. She is currently Head of the Laboratory of Immunobiology and Pathogenesis at the Chronic Diseases Research Centre (CEDOC). She has a strong academic track record in Immune Physiology, Cell Biology and Signaling with over 1180 citations (source: [Google Scholar](#)). Her studies, led to a new understanding of how the molecular organization of the signaling pathways controls T cell activation (she is corresponding author of the paper). Building on her previous research work, her group combines immune physiology, cell biology and signaling with super-resolution microscopy approaches to understand how T cell signaling architecture determines immune function and disease. Using tissue samples from patients, her group investigates the role of anomalous T cell signaling in the chronic immune activation underpinning immunodeficiency and auto-immune diseases.

### AWARDS AND HONORS

2013-2014	French AIDS Research Foundation (ANRS) postdoctoral fellowship
2011-2013	French AIDS Association (Sidaction) postdoctoral fellowship
2008-2010	European Molecular Biology Organization (EMBO) postdoctoral fellowship- 15% success rate
2002-2006	Portuguese Foundation for Science and Technology (FCT) PhD scholarship
2001-2002	Calouste Gulbenkian Foundation and Portuguese Foundation for Science and Technology (FCT), 1-year conjoint PhD stipend
2001	Portuguese National Pharmaceutical Association (ANF), best Pharmaceutical Sciences Graduate Award
2001	Portuguese Pharmaceutical Speciality College (Ordem dos Farmacêuticos), best Pharmaceutical Sciences Graduate Award
2001	ERASMUS Scholarship, European Union
1997-2000	Portuguese Ministry of Science and Higher Education, best Pharmaceutical Sciences student Award (three consecutive years)

### PATENTS:

Business Development and Industrial Partnerships Department, DI2014-25. 'Identification of a new player in antigen-mediated NF- $\kappa$ B pathway'

### ACTIVE GRANTS

Grant	Period	Value
"Defining the 3D-topography of signaling territories in CD4 T cell function and in HIV-induced immunodeficiency", FCT Investigator Starting Grant. PI: <b>H. Soares</b>	2014-2019	5-year work contract
"HIV-1 subversion of T cell life and death signals at the immunological synapse and in an endosomal signaling compartment", ANRS (French AIDS Research Foundation). PI: <b>H. Soares</b> , Co-I: A. Alcover	2013-2015	€75920
"Coordinating signaling, cytoskeleton and intracellular traffic to control major leukocyte effector function", ANR (French National Research Foundation). PI: F. Niedergan, Co-I: <b>H. Soares</b>	2011-2015	€740820

## INACTIVE GRANTS

- 2011-2013 "Subversion by HIV-1 of the immunological synapse and of signal transduction mechanisms that drive T cell activation", ANRS (French AIDS Research Foundation) PI: A. Alcover; Co-I: **H. Soares**
- 2009-2011 "HIV-1 and polarized vesicle traffic involves in immune synapse formation", ANRS (French AIDS Research Foundation) PI: A. Alcover; Co-I: **H. Soares**

## PUBLICATIONS:

1. **Soares H\***. HIV-1 intersection with CD4 T cell vesicle exocytosis: intercellular communication goes viral. [Frontiers in Immunology](#). 2014. 5:454 \*Corresponding author
2. **Soares H**, Lasserre R, Alcover A. Orchestrating cytoskeleton and intracellular vesicle traffic to build functional immunological synapses. [Immunological Reviews](#). 2013. 256(1): 118-13
3. **Soares H\***, Henriques R, Ventimiglia L, Alonso MA, Zimmer C, Thoulouze MI, Alcover A. A regulated vesicle fusion cascade generates signaling nanoterritories that control T-cell activation at the immunological synapse. [Journal of Experimental Medicine](#). 2013. 210(11): 2415-33. (Selected for 1000Prime as being of special significance in its field; highlighted on Journal of Cell Biology and on Journal of General Physiology) \*Corresponding author
4. Herbert S, **Soares H**, Zimmer C, Henriques R. Single-molecule super-resolution microscopy: deeper and faster. [Microscopy and Microanalysis](#). 2012. 18(6): 1419-29
5. **Soares H**, Waechter H, Glaichenhaus N, Mougneau E, Yagita H, Mizenina O, Dudziak D, Nussenzweig MC, Steinman RM. A subset of Dendritic cells induces CD4<sup>+</sup> T cells to produce IFN- $\gamma$  by an IL-12-independent but CD70-dependent mechanism in vivo. [J. Exp. Med.](#) 2007. 204 (5): 1095-1106
6. Trumpfheller C, Finke JS, Lopez CB, Moran TM, Moltedo B, **Soares H**, Huang Y, Schlesinger SJ, Park CG, Nussenzweig MC, Granelli-Piperno A, Steinman RM. Intensified and protective CD4<sup>+</sup> T cell immunity in mice with anti-dendritic cell HIV gag fusion antibody vaccine. [J. Exp. Med.](#) 2006. 203 (3): 607-617
7. Bonifaz LC, Bonnyay DP, Charalambous A, Darguste DI, Fujii S, **Soares H**, Brimmes MK, Moltedo B, Moran TM, Steinman RM. In vivo targeting of antigens to maturing dendritic cells via DEC-205 receptor improves T cell vaccination. [J. Exp. Med.](#) 2004. 199(6): 815-824
8. Andrade LCR, Paixão JA, de Almeida MJM, Martins RML, **Soares HIM**, Moreno MJSM, Sá e Melo ML, Campos Neves AS. 16 $\alpha$ , 17 $\alpha$ -Epoxy-20-oxopregn-5-ene-3 $\beta$ , 21-diyl diacetate. 2003. [Acta Crystallogr. \(E\)](#) E59: 299-301
9. Andrade LCR, Paixão JA, de Almeida MJM, Martins RML, **Soares HIM**, Moreno MJSM, Sá e Melo ML, Campos Neves AS. 16 $\alpha$ -Hydroxi-20-oxopregn-5-en-3 $\beta$ -yl acetate. 2001. [Acta Crystallogr. \(E\)](#) E57: 571-57
10. Andrade LCR, Paixão JA, de Almeida MJM, Martins RML, **Soares HIM**, Morais GJR, Moreno MJSM, Sá e Melo ML, Campos Neves AS. 16 $\alpha$ ,17 $\nu$ -Epoxi-20-oxopregn-5-en-3 $\beta$ -yl acetate. 2001. [Acta Crystallogr. \(C\)](#) C57: 587-589

## SELECTED COMMUNICATIONS

- 2015 **Super-Resolution in Infection and Immunity Symposium**, Oeiras, Portugal. *HIV-1 alters the nano-architecture of TCR signalling*- oral communication
- 2014 **XL Meeting of Sociedade Portuguesa de Imunologia (SPI)**, Lisbon, Portugal. *HIV-1 alters the nano-architecture of TCR signalling*- oral communication
- 2014 **EMBO conference series in Lymphocyte Signaling**, Bertinoro, Italy. *Regulated vesicle fusion generates signaling nanoterritories that control T cell activation at the immunological synapse*- oral communication
- 2014 **EMBO conference series in Lymphocyte Signaling**, Bertinoro, Italy. *HIV-1 modulates TCR signaling nanoterritories*-poster communication
- 2013 **Universidade do Algarve (UAIG)**, Faro, Portugal. *Spatial Regulation of Lymphocyte Activation: in Health and upon HIV-1 infection*. Oral Communication
- 2013 **14<sup>th</sup> IUMB Conference**, Marrakech, Morocco. *HIV-1 Nef modulates TCR signalling nanoterritories*- oral communication
- 2012 **Instituto Gulbenkian de Ciência (IGC)**, Oeiras, Portugal. *Immunological Synapse taught by HIV-1*- oral communication
- 2012 **Instituto de Medicina Molecular (IMM)**, Lisbon, Portugal. *Immunological Synapse taught by HIV-1*- oral communication
- 2012 **Cell Symposia: Human Immunity**, Lisbon, Portugal. *HIV unveils: regulated vesicle traffic conveys T cell receptor signalling*-poster communication
- 2011 **EMBO Meeting**, Vienna, Austria. *HIV unveils: regulated vesicle fusion conveys T cell receptor signalling*- poster

communication

- 2011 **Todai Forum**, Paris, France. *HIV-1 disrupts signal amplification at Immunological Synapse*
- 2010 **XXXVI Meeting of Sociedade Portuguesa de Imunologia**, Braga, Portugal. *Polarized molecular traffic in immune synapse formation: a feedback loop targeted by HIV-1- oral communication*
- 2009 **EMBO Workshop: Visualizing Immune System Complexity**, Marseille-Luminy, France. *HIV-1 impairs vesicular traffic in immunological synapse formation-* poster communication
- 2008 **EMBO conference series: At the Joint Edge of Cellular Microbiology and Cell Biology**, Villars-sur-Ollon. *HIV-1 impairs vesicular traffic in immunological synapse formation-* poster communication
- 2007 **Immuno Rio**, Rio de Janeiro, Brazil. *A subset of dendritic cells induces CD4+ T cells to produce IFN $\gamma$  by an IL-12 independent CD70-dependent mechanism in vivo-* poster communication
- 2007 **Instituto de Medicina Molecular e Celular (IBMC)**, Porto, Portugal. *A subset of dendritic cells induces CD4+ T cells to produce IFN $\gamma$  by an IL-12 independent CD70-dependent mechanism in vivo-* oral communication
- 2000 **12<sup>th</sup> National Conference in Physics and 10<sup>th</sup> Iberic Meeting for Physics Teaching**, Figueira da Foz, Portugal. *16 $\alpha$ ,17 $\alpha$ -Epoxi-20-oxopregn-5-en-3b-yl acetate*

#### ORGANIZATION OF INTERNATIONAL CONFERENCES

- 2015 [Super-Resolution in Infection and Immunity Symposium](#), Oeiras, Portugal
- 2008 [4<sup>th</sup> Gulbenkian Alumni Meetings: Alternative Careers For Scientists](#), Oeiras, Portugal

#### ORGANIZATION OF INTERNATIONAL GRADUATE COURSES

- 2015 *Immune Chronic Diseases Course* for the [Graduate Program Science for the Development](#), Cape Verde
- 2014 *Immune Chronic Diseases Course* for the [Graduate Program Science for the Development](#), Cape Verde

#### GRADUATE TEACHING

- 2015 *Cell Biology Course* for the Gulbenkian PhD Program, Oeiras, Portugal
- 2015 *Immunobiology/Host Microbe Interaction Course* for the Gulbenkian PhD Program, Oeiras, Portugal
- 2015 *Immune Chronic Diseases Course* for the [Graduate Program Science for the Development](#), Cape Verde
- 2014 *Immunology Course* for the [Graduate Program Science for the Development](#), Cape Verde
- 2014 *Immune Chronic Diseases Course* for the Graduate Program Science for the Development, Cape Verde
- 2008 *Introduction to Immunology Course* for the Experimental Biology and Biomedicine Graduate Program, Coimbra, Portugal

#### PRIMARY GRADUATE SUPERVISION AND MENTORSHIP

Period	Name	Current Position
2015	Joana Silva	Research Trainee, Immunobiology and Pathogenesis Group
2010-2014	Nassima Messali	Postdoctoral Researcher, Institut Pasteur, Paris, France
2010	Nerea Ngfok	Graduate Studies at Ecole Normale Supérieure, Paris, France
2004-2007	HaeNa Waechter	Research Scientist, New York City Department of Health and Mental Hygiene, NYC, USA
2007-2008	Courtney Kluger	Medical doctor at North Shore-LIJ Health System, USA

#### REVIEW PANELS

Ad-hoc reviewer for *Cell Death and Disease*.

#### SERVICE

- 2015-now Co-organizer of the seminar series of Chronic Diseases Research Centre
- 2014-now Member of the pre-selection committee of the Graduate Program Science for the Development, Cape Verde

#### SCIENCE OUTREACH ACTIVITIES

- 2011-now Member of the scientific committee of [Science for All](#), a web platform aimed at increasing scientific literacy of high school students
- 2007 *My life in Science*, lecture and round table with pharmaceutical sciences undergrads, Universidade de Coimbra, Coimbra, Portugal. (organizer Pr. Maria José Moreno)
- 2007 *What is a Scientist?*, lecture and round table with 4<sup>th</sup> grade elementary students:, Escola do 1<sup>o</sup> Ciclo do Ensino básico de Alvor, Alvor, Portugal

#### PROFESSIONAL SOCIETIES MEMBERSHIP

- European Society of Clinical Microbiology and Infectious Diseases (ESCMID)
- Sociedade Portuguesa de Imunologia (SPI)