

CURRICULUM VITAE

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RESEARCHER ID: [E-7548-2013](https://pubmed.ncbi.nlm.nih.gov/author/75482013/)

URL: <http://cedoc.unl.pt/membrane-traffic-in-infection-and-disease/>

EDUCATION

2003 Ph.D., Biology, University of London, **Imperial College London**, UK (Advisor: Miguel Seabra)

1997 B.Sc., Microbiology and Genetics, **University of Lisbon**, Faculty of Sciences, Portugal

CURRENT POSITIONS

2012-Present **Associate Professor** at NOVA Medical School|*Faculdade de Ciências Médicas, Universidade NOVA de Lisboa*, Portugal

PREVIOUS POSITIONS

2015-2020 **Principal Investigator** (*Investigador Principal*) at Chronic Diseases Research Center (CEDOC); NOVA Medical School|*Faculdade de Ciências Médicas, Universidade NOVA de Lisboa*, Portugal

2012-2020 **Invited Assistant Professor** (*Professor Auxiliar Convidado*) at NOVA Medical School|*Faculdade de Ciências Médicas, Universidade NOVA de Lisboa*, Portugal

2009-2015 **Principal Investigator** (*Investigador Auxiliar*) at Chronic Diseases Research Center (CEDOC); NOVA Medical School|*Faculdade de Ciências Médicas, Universidade NOVA de Lisboa*, Portugal

2008-2009 Instructor in Medicine at **Harvard Medical School**

2003-2009 Post-Doctoral Fellow at **Harvard Medical School**, Brigham and Women's Hospital (Advisor: Michael Brenner)

FELLOWSHIPS AND AWARDS

2015-2020 Investigator FCT (Development) **researcher contract**, *Fundação para a Ciência e a Tecnologia*

2009-2014 *Ciência 2008* **researcher contract**, *Fundação para a Ciência e a Tecnologia*

2007 Harvard Medical School **Excellence in Tutoring** Award

2005-2008 Postdoctoral **Fellowship**, Arthritis Foundation

1999-2003 PhD **Fellowship**, *Fundação para a Ciência e a Tecnologia*

1997-1999 Research **Fellowship**, *Fundação para a Ciência e a Tecnologia*

SELECTED COMPETITIVE FUNDING

2018-2021 *Fundação para a Ciência e a Tecnologia*, "Molecular mechanisms of melanin internalization and processing by keratinocytes", **Principal Investigator**; 225,119 €

2018-2021 European Commission (Twinning), "Excel in Rare Diseases Research: Focus on Lysosomal Disorders and Ciliopathies – LYSOCIL", **Coordinator**; 967,572€

2018-2019 *Fundação para a Ciência e a Tecnologia* (iNOVA4Health), "Developing novel modulators of skin pigmentation"; **Investigator**; 91.050 €

2017-2018 *Universidade NOVA de Lisboa (NOVA Saúde)*, "Impairing tumor progression through the inactivation of the small G protein Arl13b", **Principal Investigator**; 12,000€

2016-2018 *Fundação para a Ciência e a Tecnologia*, "Molecular mechanisms of cell migration and invasion: developing a new strategy to impair tumor progression", **Principal Investigator**; 198,942€

- 2015-2020 *Fundação para a Ciência e a Tecnologia*, “Regulation of endocytic recycling traffic: implications for ciliogenesis, cell migration and cytokinesis”, **Principal Investigator**; 366,913€
- 2014-2015 *Fundação para a Ciência e a Tecnologia*, “Molecular mechanisms of melanin transfer in skin pigmentation”, **Investigator**; 45,840€
- 2012-2015 *Fundação para a Ciência e a Tecnologia*, “A new approach to fight tuberculosis”, **Co-Principal Investigator**; 197,387€
- 2011-2014 *Fundação para a Ciência e a Tecnologia*, “Molecular mechanisms of melanosome transfer and processing by keratinocytes”, **Principal Investigator**; 193,060€
- 2010-2013 *Fundação para a Ciência e a Tecnologia*, “Subversion of the host endocytic pathway by Plasmodium sporozoites”, **Principal Investigator**; 199,584€
- 2010-2013 *Fundação para a Ciência e a Tecnologia*, “Molecular dissection of the intracellular role of Plasmodium in macrophages and dendritic cells”, **Principal Investigator**; 199,920€
- 2009-2013 European Commission (Marie Curie IRG), “Role of Arl13b in endocytic trafficking”, **Principal Investigator**; 100,000 €

SELECTED PUBLICATIONS

- Casalou C., Ferreira A., **Barral D.C.** (2020) The Role of ARF Family Proteins and Their Regulators and Effectors in Cancer Progression: A Therapeutic Perspective. *Front Cell Dev Biol.* Apr 21;8:217. doi: 10.3389/fcell.2020.00217. eCollection 2020. **IF: 4.714**
- Moreiras H., Pereira F.J.C., Neto M.V., Bento-Lopes L., Festas T.C., Seabra M.C., **Barral D.C.** (2019) The exocyst is required for melanin exocytosis from melanocytes and transfer to keratinocytes. *Pigment Cell Melanoma Res.* Oct 30. doi: 10.1111/pcmr.12840. **IF: 4.172**
- Casalou C., Faustino A., Silva F., Ferreira I.C., Vaqueirinho D., Ferreira A., Castanheira P., Barona T., Ramalho J.S., Serpa J., Félix A., **Barral D.C.** (2019) Arl13b Regulates Breast Cancer Cell Migration and Invasion by Controlling Integrin-Mediated Signaling. *Cancers (Basel).* Sep 29;11(10). pii: E1461. doi: 10.3390/cancers11101461. **IF: 6.162**
- Kuhns S., Seixas C., Pestana S., Tavares B., Nogueira R., Jacinto R., Ramalho J.S., Simpson J.C., Andersen J.S., Echard A., Lopes S.S., **Barral D.C.**, Blacque O.E. (2019) Rab35 controls cilium length, function and membrane composition. *EMBO Rep.* Aug 2:e47625. doi: 10.15252/embr.201847625. **IF: 8.3**
- Moreiras H., Lopes-da-Silva M., Seabra M.C., Barral D.C. (2019) Melanin processing by keratinocytes: a non-microbial type of host-pathogen interaction? *Traffic.* Apr;20(4):301-304. doi: 10.1111/tra.12638. **IF: 4.4**
- Seixas E., Escrevente C., Seabra M.C., **Barral D.C.** (2018) Rab GTPase regulation of bacteria and protozoa phagocytosis occurs through the modulation of phagocytic receptor surface expression. *Sci Rep.* Aug 29;8(1):12998. doi: 10.1038/s41598-018-31171-5. **IF: 4.122**
- Correia M.S., Moreiras H., Pereira F.J.C., Neto M.V., Festas T.C., Tarafder A.K., Ramalho J.S., Seabra M.C., Barral D.C. (2017) Melanin transferred to keratinocytes resides in non-degradative endocytic compartments. *J Invest Dermatol.* Mar;138(3):637-646. doi: 10.1016/j.jid.2017.09.042. Epub 2017 Oct 24. **IF: 6.287**
- Proença J.T., **Barral D.C.***, Gordo I.* (2017) Commensal-to-pathogen transition: One-single transposon insertion results in two pathoadaptive traits in Escherichia coli-macrophage interaction. *Sci Rep.* Jul 3;7(1):4504. doi: 10.1038/s41598-017-04081-1. **IF: 4.122** *Corresponding Author.
- Casalou C., Faustino A., **Barral D.C.** (2016) Arf proteins in cancer cell migration. *Small GTPases.* Oct;7(4):270-282. Epub 2016 Sep 2. doi: 10.1080/21541248.2016.1228792.

10. Encarnação M., Espada L., Escrevente C., Mateus D., Ramalho J., Michelet X., Santarino I., Hsu V.W., Brenner M.B., **Barral D.C.**, Vieira O.V. (2016) A Rab3a-dependent complex essential for lysosome positioning and plasma membrane repair. *J Cell Biol.* Jun 20;213(6):631-40. doi: 10.1083/jcb.201511093. **IF: 8.717**
11. Seixas C., Choi S.Y., Polgar N., Umberger N.L., East M.P., Zuo X., Moreiras H., Ghossoub R., Benmerah A., Kahn R.A., Fogelgren B., Caspary T., Lipschutz J.H., **Barral D.C.** (2015) Arl13b and the exocyst interact synergistically in ciliogenesis. *Mol Biol Cell.* Jan 15;27(2):308-20. doi: 10.1091/mbc.E15-02-0061. Epub 2015 Nov 18. **IF: 4.037**
12. Thieleke-Matos C., Lopes da Silva M., Cabrita-Santos L., Portal M.D., Rodrigues I.P., Zuzarte-Luis V., Ramalho J.S., Futter C.E., Mota M.M., **Barral D.C.***, Seabra M.C.* (2015) Host cell autophagy contributes to *Plasmodium* liver development. *Cell Microbiol.* Mar;18(3):437-50. doi: 10.1111/cmi.12524. Epub 2015 Nov 4. **IF: 4.46** *Corresponding Author.
13. Thieleke-Matos C., Lopes da Silva M., Cabrita-Santos L., Pires C.F., Ramalho J.S., Ikononov O., Seixas E., Shisheva A., Seabra M.C., **Barral D.C.** (2014) Host PI(3,5)P₂ activity is required for *Plasmodium berghei* growth during liver stage infection. *Traffic.* Oct;15(10):1066-82. doi: 10.1111/tra.12190. Epub 2014 Aug 21. **IF: 4.35**
14. Casalou C., Seixas C., Portelinha A., Barros M., Pintado P., Ramalho J.S., Lopes S.S., **Barral D.C.** (2014) Arl13b and the non-muscle myosin heavy chain IIA are required for circular dorsal ruffle formation and cell migration. *J. Cell Sci.* Jun 15;127(Pt 12):2709-22. doi: 10.1242/jcs.143446. Epub 2014 Apr 28. **IF: 5.432**
15. Tarafder A.K., Bolasco G., Correia M.S., Pereira F.J.C., Iannone L., Hume A.N., Kirkpatrick N., Picardo M., Torrisi M.R., Rodrigues I.P., Ramalho J.S., Futter C.E., **Barral D.C.**, Seabra M.C. (2014) Rab11b mediates melanin transfer between donor melanocytes and acceptor keratinocytes via coupled exo/endocytosis. *J. Invest. Dermatol.* Apr;134(4):1056-66. doi: 10.1038/jid.2013.432. Epub 2013 Oct 18. **IF: 7.216**
16. **Barral D.C.**, Garg S., Casalou C., Watts G., Ramalho J.S., Hsu V.W., Brenner M.B. (2012) Arl13b regulates endocytic recycling traffic. *Proc Natl Acad Sci U S A.* Dec 26;109(52):21354-9. doi: 10.1073/pnas.1218272110. Epub 2012 Dec 7. **IF: 9.737**
17. Lopes da Silva M., Thieleke-Matos C., Cabrita-Santos L., Ramalho J.S., Wavre-Shapton S.T., Futter C.E., **Barral D.C.**, Seabra M.C. (2012) The Host Endocytic Pathway is Essential for *Plasmodium berghei* Late Liver Stage Development. *Traffic.* Oct;13(10):1351-63. doi: 10.1111/j.1600-0854.2012.01398.x. Epub 2012 Aug 3. **IF: 4.652**
18. Garg S., Sharma M., Ung C., Tuli A., **Barral D.C.**, Hava D.L., Veerapen N., Besra G.S., Hacohen N., Brenner M.B. (2011) Lysosomal trafficking, antigen presentation, and microbial killing are controlled by the Arf-like GTPase Arl8b. *Immunity.* Aug 26;35(2):182-93. doi: 10.1016/j.immuni.2011.06.009. Epub 2011 Jul 28. **IF: 21.637**

SELECTED ORAL COMMUNICATIONS

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| 2019 | FASEB Conference on The Biology of Cilia and Flagella, Snowmass Village, Colorado, USA |
| 2018 | 21 st Meeting of the European Society for Pigment Cell Research, Rennes, France |
| 2016 | FASEB Conference on GTPases in Trafficking, Autophagy and Disease, West Palm Beach, FL, USA |
| 2015 | 19 th Meeting of the European Society for Pigment cell Research, Edinburgh, UK |
| 2014 | Zing Conference on Lysosome Related Organelles, Nerja, Spain |
| 2013 | FASEB Conference on Arf and Rab Family G Proteins, Snowmass Village, CO, USA |
| 2012 | Cilia in Development and Disease Conference, London, UK |
| 2011 | EMBO Conference on Dynamic Endosomes: Mechanisms Controlling Endocytosis, Chania, Greece |

ORGANIZATION OF GRADUATE COURSES AND SCIENTIFIC MEETINGS

- 2019 **Member of the Scientific Committee** of the 10th Meeting on Signal Transduction SINAL; Olhão, Portugal
- 2019 **Organizer** of the Workshop “Ciliopathies: Rare Diseases in debate”; Lisbon, Portugal
- 2018 **Member of the Scientific Committee** of the 2nd NMS Symposium on Chronic Diseases and Translational Science; Lisbon, Portugal
- 2018 **Member of the Scientific Committee** of the 21st Meeting of the European Society for Pigment Cell Research and chair of the session on Pigmentation genetics and disorders; Rennes, France
- 2018 **Organizer** of the 9th Meeting on Signal Transduction SINAL; Lisbon, Portugal
- 2018 **Member of the Scientific Committee** of the 1st Meeting on Vesicular Biology; Coimbra, Portugal
- 2017-Present **Organizer**, Advanced Research Methods for Master students, NOVA Medical School|*Faculdade de Ciências Médicas, Universidade NOVA de Lisboa*, Portugal
- 2017 **Member of the Scientific Committee** of the Scientific Symposium and Job Fair - Career Opportunities for Post-Doctoral Researchers in Life Sciences; Cascais, Portugal
- 2017 **Organizer** of the 8th Meeting on Signal Transduction SINAL; Lisbon, Portugal
- 2016 **Chair** of the session on GTPases and disease of the FASEB Conference on GTPases in Trafficking, Autophagy and Disease, West Palm Beach, FL, USA
- 2016 **Member of the Scientific Committee** of the 1st CEDOC Symposium on Chronic Diseases; Lisbon, Portugal
- 2016 **Member of the Scientific Committee** of the 1st Small Meeting on Endocytic Trafficking and Signaling; Braga, Portugal
- 2013 **Organizer**, 18th Meeting of the European Society for Pigment Cell Research, Portugal
- 2011-Present **Organizer**, Cellular and Molecular Mechanisms of Disease Course for PhD students, NOVA Medical School|*Faculdade de Ciências Médicas, Universidade NOVA de Lisboa*, Portugal

INSTITUTIONAL RESPONSIBILITIES

- 2020-Present **Coordinator** of CEDOC’s Core Facilities, NOVA Medical School|*Faculdade de Ciências Médicas da Universidade NOVA de Lisboa*, Portugal
- 2018 – 2020 Science Communication **Supervisor**, NOVA Medical School|*Faculdade de Ciências Médicas da Universidade NOVA de Lisboa*, Portugal
- 2016-Present **Director** of the Inter-University **Doctoral Programme** in Ageing and Chronic Diseases (PhDOC)
- 2016-2018 **Member** of the **Committee for the Evaluation** of the **New Curriculum of the Medical Degree** of NOVA Medical School|*Faculdade de Ciências Médicas, Universidade NOVA de Lisboa*, Portugal
- 2012-2018 Elected **Coordinator** of the Biomedical and Translational Research Group and Member of CEDOC’s **Directive Board**, NOVA Medical School|*Faculdade de Ciências Médicas, Universidade NOVA de Lisboa*, Portugal
- 2012-2019 **Member** of the **Admissions Committee** of the PhD Program in Medicine and Life Sciences of NOVA Medical School|*Faculdade de Ciências Médicas, Universidade NOVA de Lisboa*, Portugal
- 2010-Present Elected **Member** of the **Scientific Council** of NOVA Medical School|*Faculdade de Ciências Médicas, Universidade NOVA de Lisboa*, Portugal

COMMISSIONS OF TRUST

- 2015-Present **Scientific Advisory Board**, BioSYS PhD Program, Faculty of Sciences, University of Lisbon, Portugal
- 2015-2017 **Scientific Advisory Board**, *Raríssimas* Rare Diseases Association, Portugal
- 2013-Present Review Editor for *Frontiers in Membrane Traffic* (**Nature Publishing Group**)
- 2011 Evaluator, **Pfizer Research Award**
- 2009-Present Ad-hoc reviewer for *Molecular Biology of the Cell*, *EMBO Journal*, *Nature Immunology*, *Journal of Cell Biology*, *Journal of Cell Science*, *PLoS Pathogens*, *Pigment Cell and Melanoma Research*.

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- 2009-2020 **11** Post-docs (10 completed), **17** PhD students (9 completed), **8** Master students (7 completed), CEDOC, NOVA Medical School|*Faculdade de Ciências Médicas, Universidade NOVA de Lisboa*, Portugal

MEMBERSHIP OF SCIENTIFIC SOCIETIES

Member of the American Society for Cell Biology (ASCB), European Society for Pigment Cell Research (ESPCR) and Sociedade Portuguesa de Bioquímica (SPB)

Member and former **President**, Portuguese American Post-Graduate Society (PAPS)