

# Curriculum vitae

## Personal information

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<b>Surname(s) / First name(s)</b>	Brandão, Andreia Filipa Moreira Aguiar
<b>Address(es)</b>	Maia, Porto, Portugal
<b>E-mail</b>	andreia.aguiar.brandao@ipoporto.min-saude.pt
<b>Mobile</b>	+351 918078268
<b>Nationality</b>	Portuguese
<b>Date of birth</b>	21.09.1986
<b>Gender</b>	Female

## Professional/ Research experience

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<b>Dates</b>	Since October, 2016
<b>Position held</b>	Postdoc Research Fellow - Bioinformatician
<b>Main activities and responsibilities</b>	Research Fellow in the project "Inherited predisposition to prostate cancer: finding the missing heritability by combining exome sequencing and haplotype analysis in a population with strong founder effects" (ref: CIPOPOP-BPD -PTDC/DTPPIC/1308/2014). Main activities in the field of Bioinformatics.
<b>Employer</b>	Portuguese Institute of Oncology - Porto (IPO-Porto) Rua Dr. António Bernardino de Almeida, 4200-072, Porto, Portugal
<b>Sector</b>	Research
<b>Dates</b>	May, 2016 - September, 2016
<b>Position held</b>	Research Fellow - Bioinformatician
<b>Main activities and responsibilities</b>	Research Fellow in the project "Identifying susceptibility cancer biomarkers in inflammation-prone tumors: stomach and lung models" (ref: NORTE-01-0145-FEDER-000029). Main activities in the field of Bioinformatics.
<b>Employer</b>	i3S - Instituto de Investigação e Inovação em Saúde (IPATIMUP) Rua Alfredo Allen, 208, 4200-135 Porto, Portugal
<b>Sector</b>	Research

<b>Dates</b>	January, 2012 - June, 2016
<b>Position held</b>	PhD student
<b>Main activities and responsibilities</b>	PhD student with the project "Demography of modern humans in Southeast Asia (SEA): a genetic approach" (ref: SFRH/BD/78990/2011). Main activities in the fields of Population Genetics, Molecular Genetics and Bioinformatics.
<b>Employer</b>	IPATIMUP - Instituto de Patologia e Imunologia Molecular da Universidade do Porto Rua Júlio Amaral de Carvalho,45, 4200-135 Porto, Portugal
<b>Sector</b>	Research
<b>Dates</b>	September, 2012 - July, 2013
<b>Position held</b>	PhD student
<b>Main activities and responsibilities</b>	PhD student with the project "Demography of modern humans in Southeast Asia (SEA): a genetic approach" (ref: SFRH/BD/78990/2011). Main activities in the fields of Population Genetics and Molecular Genetics.
<b>Employer</b>	University of Huddersfield Queensgate, HD1 3DH Huddersfield, United Kingdom
<b>Sector</b>	Research
<b>Dates</b>	April - September, 2011
<b>Position held</b>	Research Fellow
<b>Main activities and responsibilities</b>	Research Fellow in the project "DIOMED: Transnational cooperation for technological innovation in the development of drugs for the treatment of obesity and diabetes". Main activities in the fields of Molecular Genetics, Microbiology and Proteomics.
<b>Employer</b>	IBMC - Instituto de Biologia Molecular e Celular Rua do Campo Alegre, 823, 4150-180 Porto, Portugal
<b>Sector</b>	Research
<b>Dates</b>	May - October, 2010
<b>Position held</b>	Research Fellow
<b>Main activities and responsibilities</b>	Research Fellow in the project "Patterns and processes of change (neutral and adaptive) in the hybridization area of bee ( <i>Apis mellifera iberiensis</i> ) of the Iberian Peninsula: an approach to integrate population genomics and landscape genetics" (ref: (PTDC/BIA-BEC/099640/2008). Main activities in the fields of Population Genetics and Molecular Genetics.
<b>Employer</b>	Instituto Politécnico de Bragança, Escola Superior Agrária Campus de Santa Apolónia, Apartado 1172, 5301-855 Bragança, Portugal
<b>Sector</b>	Research

<b>Dates</b>	April - October, 2008
<b>Position held</b>	Master Student, with the dissertation approval of 19 values (0-20).
<b>Main activities and responsibilities</b>	Master Student with the project "Identification of bacteriocinogenic enterococci from animal and human origin: antimicrobial activity and genetic and biochemical characterization of their bacteriocins". Main activities in the fields of Microbiology, Molecular Genetics and Proteomics.
<b>Employer</b>	Universidad Complutense de Madrid, Facultad de Veterinaria Avda. Puerta de Hierro, s/n. Ciudad Universitaria, 28040 Madrid, Spain
<b>Sector</b>	Research
<b>Dates</b>	January, 2008
<b>Position held</b>	Internship in Human Genetics, with final approval of 17 values (0-20).
<b>Main activities and responsibilities</b>	Intern student with the project "Prevalence of genetic polymorphism 677 C/T of 5,10-methylenetetrahydrofolate reductase (MTHFR) in chronic hepatitis C". Main activities in the field of Molecular Genetics.
<b>Employer</b>	Universidade de Lisboa, Faculdade de Medicina Av. Prof. Egas Moniz, Hospital Santa Maria, 1600-190 Lisbon, Portugal
<b>Sector</b>	Research
<b>Dates</b>	November – December, 2007 and February – March, 2008
<b>Position held</b>	Master Student, with the dissertation approval of 19 values (0-20).
<b>Main activities and responsibilities</b>	Master Student with the project "Identification of bacteriocinogenic enterococci from animal and human origin: antimicrobial activity and genetic and biochemical characterization of their bacteriocins". Main activities in the field of Microbiology.
<b>Employer</b>	UTAD - Universidade Trás-os-Montes e Alto Douro Apartado 1013, 5001-801 Vila Real, Portugal
<b>Sector</b>	Research

## Academic training

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<b>Dates</b>	January, 2012 - June, 2016
<b>Title of qualification awarded</b>	PhD in Biomedical Sciences
<b>Principal subjects/occupational skills covered</b>	PhD work in the fields of Population Genetics, Phylogenetics and Bioinformatics, with the development of numerous lab and bioinformatics skills, such as programming and whole-genome analyses.
<b>Name and type of organisation providing education and training</b>	ICBAS - Instituto de Ciências Biomédicas Abel Salazar da Universidade do Porto
<b>Level in national or international classification</b>	Approved with distinction

<b>Dates</b>	November, 2007 – January, 2010
<b>Title of qualification awarded</b>	Master in Technological Comparative Molecular Genetics
<b>Principal subjects/occupational skills covered</b>	In the scientific disciplines, got 16 values in Animal Molecular Cytogenetics, 16 values in Microbial Genetics, 16 values in Plant Molecular Cytogenetics, 16 values in Nucleic Acid Technology and OGM's and 15 values in Molecular Evolutionary and Comparative Genetics.
<b>Name and type of organisation providing education and training</b>	UTAD - Universidade Trás-os-Montes e Alto Douro and UCM - Universidad Complutense de Madrid/ Facultad de Veterinaria
<b>Level in national or international classification</b>	17 values (0-20)

<b>Dates</b>	September, 2004 – June, 2008
<b>Title of qualification awarded</b>	Degree in Genetics and Biotechnology
<b>Principal subjects/occupational skills covered</b>	In the scientific disciplines, got 17 values in Biotechnology, 17 values in Human Genetics, 16 values in Genetics of Microorganisms, 16 values in Nucleic Acids Technology, 16 values in Bioinformatics and Molecular Analyses, 15 values in Molecular Genetics and 15 values in Cellular Genetics.
<b>Name and type of organisation providing education and training</b>	UTAD - Universidade Trás-os-Montes e Alto Douro
<b>Level in national or international classification</b>	14 values (0-20)

## Additional training/Courses

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### Specialization course in Cancer Biology:

<b>Date</b>	From 8 <sup>th</sup> to 12 <sup>th</sup> of January 2018
<b>Name</b>	International intensive course on cancer biology: advances in epidemiology, etiology and therapy
<b>Location</b>	Faculdade de Farmácia da Universidade do Porto, Porto, Portugal

### Specialization courses in Bioinformatics:

<b>Date</b>	From 26 <sup>th</sup> to 28 <sup>th</sup> of June 2017
<b>Name</b>	Hands on course - Introduction to biological data analysis with R
<b>Location</b>	I3S, Porto, Portugal

<b>Date</b>	March, 2017
<b>Name</b>	Intro to Python for Data Science
<b>Location</b>	On-line course from DataCamp

**Date** From 6<sup>th</sup> to 7<sup>th</sup> of September, 2010  
**Name** Proteomics Workshop 2010  
**Location** Universidade de Aveiro, Aveiro, Portugal

**Date** From 12<sup>th</sup> to 13<sup>th</sup> of October, 2009  
**Name** The Gulbenkian Training Programme in Bioinformatics 10<sup>th</sup> Edition:  
 Pathway Analyses Biology  
**Location** IGC, Oeiras, Portugal

## Personal skills and competences

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Mother tongue **Portuguese**

Other languages **Proficient in English and Spanish**

Social skills and competences Verbal skills appropriate to different social situations. Ability to adapt to new contexts, be they personal, academic or professional and to meet the demands placed upon it.

Organisational skills and competences Capacity to develop, prepare and execute of field work, national and internationally.  
 Ability to coordinate a project. Good relationship with the team, trying to solve problems through dialogue.

**Computer skills and competences** Domain of Windows and Linux environment  
 Proficient Bioinformatics skills  
 Scripting skills (Linux bash)  
 Statistical and big data analyses programming skills (Python and R)  
 Genome-wide and whole-genome analyses  
 NGS analyses  
 Extensive experience in big data analyses (1000 Genomes project, Human Genome Diversity Project - HGDP)  
 Domain of Population Genetic/ Phylogenetic Software  
 Domain of software Office™ (Word™, Excel™ and PowerPoint™)

**Technical skills and competences** Technical skills in Molecular Genetics such as extraction, purification and DNA sequencing, genome-wide data analyses.  
 Technical skills in Proteomics, such as expression, purification and protein sequencing, chromatographic techniques (FPLC, HPLC), mass spectrometry analyses (MALDI-TOF).  
 Technical skills in Microbiology, such as cloning, expression, analyses of the antimicrobial activity, and others.

Driving licence Category B

## Additional Information

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### 1. Papers in Journals with international referees

Silva M., Oliveira M., Vieira D., **Brandão A.**, Rito T., Pereira J.B., Fraser R.M., Hudson B., Gandini F., Edwards C., Pala M., Koch K., Wilson J.F., Pereira L., Richards M.B., Soares P. A genetic chronology for the Indian Subcontinent points to heavily sex-biased dispersals. *BMC Evolutionary Biology* (2017) 17:88.

**Brandão A.**, Eng KK, Rito T, Cavadas B, Bulbeck D, Gandini F, Pala M, Mormina M, Hudson B, White J, Ko T-M, Saidin M, Zafarina Z, Oppenheimer S, Richards MB, Pereira L, Soares P. 2016. Quantifying the legacy of the Chinese Neolithic on the maternal genetic heritage of Taiwan and Island Southeast Asia. *Hum Genet*, 135(4):363-376.

Soares P, Trejaut JA, Rito T, Cavadas B, Hill C, Eng KK, Mormina M, **Brandão A.**, Fraser RM, Wang T-Y, Loo J-H, Snell C, Ko T-M, Amorim A, Pala M, Macaulay V, Bulbeck D, Wilson JF, Gusmão L, Pereira L, Oppenheimer S, Lin M, Richards MB. 2016. Resolving the ancestry of Austronesian-speaking populations. *Hum Genet*, 135(3), 309-326.

Cavadas, B., Soares, P., Camacho, R., **Brandão, A.**, Costa, M. D., Fernandes, V., Barbosa J., Rito, T., Pereira, L. 2015. Fine Time-Scaling of Purifying Selection on Human Non-Synonymous mtDNA Mutations Based on Worldwide Population Tree and Mother-Child Pairs. *Hum Mutat*. 36:1100-1111.

**Brandão, A.**, Almeida, T., Muñoz-Atienza, E., Torres, C., Igrejas, G., Hernández, P.E., Cintas, L.M., Poeta, P., Herranz, C. 2010. Antimicrobial activity and occurrence of bacteriocin structural genes in *Enterococcus* spp. from different sources. *Arch Microbiol* 192:927-936.

Almeida, T., **Brandão, A.**, Muñoz-Atienza, E., Torres, C., Igrejas, G., Hernández, P.E., Cintas, L.M., Poeta, P., Herranz, C. 2011. Identification of bacteriocin genes in enterococci isolated from hunting animals and salt water fish. *J Food Prot*. 74:1252-1260.

### 2. Oral Communications

**Brandão, A.** Population Genetics meets Cancer: the story of BRCA2 c.156\_157insAlu and BRCA1 c.3331\_3334del founder mutations. 2018. Scientific Meeting of Research Centre of Portuguese Institute of Oncology (CI/EPOP IPO-Porto) (Porto, March 23, 2018).

Almeida, M., Rito, T., Shoeib, T., Vieira, D., **Brandão, A.**, Moreira, S., Guimarães, J., Azevedo, A., Yao, B., Gandini, F., Pala, M., Pereira, L., Oppenheimer, S., Richards, MB., Soares P. 2018. The genetic impact of the foraging-based “Coastal Neolithic” and Rice Neolithic in Mainland Southeast Asia. 2018. XLII Portuguese Genetics Conference. (i3S - Instituto de Investigação e Inovação em Saúde, Porto, 14-15 June). - Prize Prof. Doutor Amândio Tavares for best oral presentation.

**Brandão, A.** 2017. The BRCA2 c.156\_157insAlu and BRCA1 c.3331\_3334del founder mutations. CIMBA - Consortium of Investigators of Modifiers of BRCA1/2 (Santiago de Compostela, September 17-19, 2017)

Soares, P., Rito, T., Cavadas, B., **Brandão, A.**, Pala, M., Oppenheimer, S., Pereira, L., Richards, M.B. 2015. Genetic ancestry of Austronesian-speaking populations in Island Southeast Asia and the Pacific. XXXIX Jornadas Portuguesas de Genética (Braga, May 25 - 27, 2015).

Igrejas, G., Gonçalves, A., Santos, T., Marinho, C., Almeida, T., Araújo, C., Barreto, A., Barros, J., **Brandão, A.**, Caleja, C., Correia, S., Carneiro, C., Costa, L., Coelho, C., Figueiredo, N., Guimarães, B., Monteiro, R., Moura, I., Pacheco, R., Pinto, L., Pinheiro, S., Radhouani, H., Ramos, S., Silva, N., Sousa, M., Poeta, P. 2015. A decade-long commitment to the OMICS of antimicrobial resistance. 1st International Caparica Conference in Antibiotic Resistance - IC2AR (Lisboa, January 26 - 28, 2015).

**Brandão A**, Oppenheimer F, Chang O, Noupnan, White J, Bouasisengpaseuth B, Pereira L, Soares P, Richards MB, Oppenheimer S. 2015. Laos mtDNA study in the MMAP project: preliminary survey findings. The 20th Congress of the Indo-Pacific Prehistory Association (IPPA) (Siem Reap, Kingdom of Cambodia, January 12 - 18, 2015).

Oppenheimer S, White J, Bouasisengpaseuth B, **Brandão A**, Pereira L, Soares P, Richards MB. 2014. Tracing Neolithic migrations in Indo-China and the importance of adding genetic data from regions adjoining the central Mekong route: Laos, Cambodia and inland Vietnam/Thailand. The 20th Congress of the Indo-Pacific Prehistory Association (IPPA) (Siem Reap, Kingdom of Cambodia, January 12 - 18, 2015).

Pinto, M.A., Muñoz, I., **Brandão, A.**, Moura, I., Azevedo, J., De la Rúa, P., Johnston, J.S., Patton, J.C. 2010. Patrones y procesos de variación (neutral y adaptativa) de la abeja ibérica en el área de hibridación. VI Congreso Apícola Nacional. Nacional (Córdoba, November, 12 - 13, 2010).

Pinto, M.A., Johnston, J.S., Azevedo, J.C., **Brandão, A.**, Moura, I., Muñoz, I., Rúa, P., Patton, J.C. 2010. A landscape genetics approach to unravel the complex evolutionary history of the Iberian honey bee hybrid zone. IUFRO Landscape Ecology Working Group International Conference: Forest Landscapes and Global Change (Bragança, September 21 – 27, 2010).

**Brandão, A.** 2009. Identification of bacteriocinogenic enterococci from human and animal origin. 3<sup>as</sup> Jornadas de Biologia (Vila Real, October 21 - 22, 2009).

Poeta, P., Radhouani, H., Caleja, C., Araújo, C., **Brandão, A.**, Almeida, T., Cintas, L. M, Campanero, C., Herranz, C., Hernández, P. E, Rodrigues, J., Torres, C., Igrejas, G. 2009. Resistência a antibióticos e factores de virulência em bactérias de animais selvagens e sua função como probióticos, I Simpósio de Selvagens e Exóticos. A actualidade do sector animal, Vila Real, 2009.

### 3. Participation in scientific projects

Project PTDC/MED-GEN/28245/2017, entitled "The role of chromosome segregation machinery defects in genetic predisposition to prostate cancer". Co-financed by the Fundação para a Ciência e a Tecnologia and FEDER through the Programa PTDC, Projectos de Investigação Científica e Desenvolvimento Tecnológico em Todos os Domínios Científicos.

Project PTDC/DTP-PIC/1308/2014, entitled "Inherited predisposition to prostate cancer: finding the missing heritability by combining exome sequencing and haplotype analyses in a population with strong founder effects". Co-financed by the Fundação para a Ciência e a Tecnologia and FEDER through the Programa PTDC, Projectos de Investigação Científica e Desenvolvimento Tecnológico em Todos os Domínios Científicos.

Project NORTE-01-0145-FEDER-000029, entitled "Identifying susceptibility cancer biomarkers in inflammation prone tumors: stomach and lung models". Co-financed by NORTE2020.

Project PTDC/IVC-ANT/4917/2012, entitled "Genetic history and population structure in Southeast Asia". Co-financed by the Fundação para a Ciência e a Tecnologia and FEDER through the Programa PTDC, Projectos de Investigação Científica e Desenvolvimento Tecnológico em Todos os Domínios Científicos.

Project "DIOMED: cooperação transnacional para a inovação tecnológica no desenvolvimento de fármacos para o tratamento da obesidade e diabetes". Project was a South European collaborative effort involving IBMC (Porto), Biocant (Coimbra), IRB (Barcelona), Universidad de Santiago de Compostela (USC, Santiago de Compostela), INSERM (Toulouse), and Barcelona Scientific Park (Barcelona).

Project "Projecto Verão Ciência no IPB!", entitled "How to extract and amplify DNA from a bee?", Co-financed by the Programa de Ocupação Científica de Jovens nas Férias 2010, on 19-23 July 2010. Escola Superior Agrária, Instituto Politécnico de Bragança, Bragança, Portugal

Project "Projecto Verão Ciência no IPB!", entitled "Is there any genetic aroma? Come learn the basics of molecular biology and chemical products." Co-financed by the Programa de Ocupação Científica de Jovens nas Férias 2010, on 19-23 July 2010. Escola Superior Agrária, Instituto Politécnico de Bragança, Bragança, Portugal

Project PTDC/BIA-BEC/099640/2008, entitled "Patterns and processes of change (neutral and adaptive) in the hybridization area of bee (*Apis mellifera iberiensis*) of the Iberian Peninsula: an approach to integrate population genomics and landscape genetics". Co-financed by the Fundação para a Ciência e a Tecnologia and FEDER through the Programa PTDC, Projectos de Investigação Científica e Desenvolvimento Tecnológico em Todos os Domínios Científicos.

Project HP2006-0070, entitled "Biotechnological Potential - Probiotic *Enterococcus* spp. Bacteriocinogenic isolated from fish and game animals: antimicrobial activity and biochemical and genetic characterization of their bacteriocins", submitted to the Luso-Espanhol CRUP (Conselho de Reitores das Universidades Portuguesas) and MCT (Ministério da Ciência Y Tecnologia), program of the Acções Integradas Hispano-Portuguesas for the years 2009-2011.

Andreia Brandão  
Oporto, February 18<sup>th</sup>, 2019