

Nuno Luís Barbosa Morais
Curriculum Vitae – April 3, 2024

Biographical

Born November 5, 1977 in Viana do Castelo, Portugal
Portuguese citizenship, male

Institutional address:

Instituto de Medicina Molecular
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Languages:

Portuguese (native), English (fluent), Spanish (fluent), French (basics)

Current occupation

Research Group Leader *2015, January -*
Instituto de Medicina Molecular João Lobo Antunes, Portugal

Guest Associate Professor *2020, March -*
Faculty of Medicine of the University of Lisbon, Portugal

Education

PhD in Biomedical Sciences, Faculty of Medicine of the University of Lisbon (Portugal) *2007*
Thesis: “Bioinformatics Studies on the Complexity of Splicing and Gene Expression”
Supervisors: Professor Samuel Aparício (Univ. Cambridge, UK), Professor Maria do Carmo Fonseca
Classification: *Summa Cum Laude* (unanimous)

Graduate Program in Biophysics and Biomedical Engineering, Faculty of Sciences of the
University of Lisbon (Portugal) [Classification: 19/20] *2001*

Degree (“Licenciatura” - Bachelor/MSc) in Technologic Physics Engineering, Instituto
Superior Técnico - Technical University of Lisbon (Portugal) [Classification: 17/20] *2000*

Professional Experience

Honorary Senior Research Fellow *2013, October - 2015, April*
Nuffield Department of Obstetrics and Gynaecology, University of Oxford, UK

Marie Curie Fellow *2013, June - 2014, May*
Instituto de Medicina Molecular, Faculdade de Medicina da Universidade de Lisboa, Portugal

Senior Postdoctoral Fellow (Computational Biology) *2010, August - 2013, May*
The Donnelly Centre, University of Toronto, Canada
Supervisor: Professor Benjamin J. Blencowe

Research Associate (Computational Biology) *2006, August - 2010, July*
Department of Oncology, University of Cambridge / Cancer Research UK
Supervisor: Professor Simon Tavaré

Research Assistant (Computational Biology)
Department of Oncology, University of Cambridge
Supervisor: Professor Simon Tavaré

2005, October - 2006, July

Visiting Appointments

Department of Oncology, University of Cambridge (UK)
(Aparício Group, Cancer Genomics Programme, as visiting PhD student)

2003, January - 2005, July

Institute of Molecular and Cell Biology (Singapore)
(Fugu Informatics Group, as visiting PhD student)

2002, August

European Molecular Biology Laboratory (Heidelberg, Germany)
(Valcárcel Group, Gene Expression Programme, as visiting PhD student)

2002, February - May

Awards and Honours

Citizen of Merit, Câmara Municipal de Viana do Castelo

2021

FCT Stimulus of Scientific Employment, Individual Support - Assistant Researcher

2020 - 2026

EMBO (European Molecular Biology Organization) Installation Grant

2015 - 2021

FCT Investigator Starting Grant

2015 - 2019

Marie Curie International Outgoing Fellowship

2011, June - 2014, May

Canadian Institutes for Health Research
Postdoctoral Fellowship

2010, July - 2012, May

EMBO (European Molecular Biology Organization)
Short-Term Fellowship (ASTF 44-2005)

2005

Fundação para a Ciência e a Tecnologia, Portugal / European Social Fund (3rd FP)
Fellowship PRAXIS XXI SFRH/BD/2914/2000 (PhD)

2001-2004

PRODEP III, Portuguese Min. Education / European Social Fund (3rd FP)
Fellowship "Programa de Estágios no Ensino Superior"

2000, March-August

Other Projects and Grant Support

Horizon 2020 Twinning: "BIOMICS: Fostering Excellent Research, Training and Innovation in Biomedical Data Science" (as P.I.)

2024 - 2027

EMBO YIP Small Grant (as P.I.)

2017

AstraZeneca Innovate Competition - Translational Research Grant (as P.I.)
"Alternative splicing during neuronal development" (awarded to Mariana Ferreira)

2016 - 2017

iMM Directors' Exploratory Project (as P.I.)

2016 - 2017

"RNA regulation in colorectal cancer: transcriptomic landscapes of metastasis and their clinical implications"

Horizon 2020 Twinning: "RiboMed: RNA in disease" (Co-PI and work package leader; PI: Maria Carmo-Fonseca)

2019 - 2023

Portuguese Roadmap of Research Infrastructures (as local P.I.)

2017 - 2021

GenomePT - National Laboratory for Genome Sequencing and Analysis

PAC - PRECISE - LISBOA-01-0145-FEDER-016394 / FCT SAICTPAC/0021/2015 (co-investigator)
2016, December 1 - 2019, November 31

“Accelerating progress toward the new era of precision medicine” (PI: Maria Carmo-Fonseca)

Iniciativa Ibérica de Investigação e Inovação Biomédica / La Caixa Project (co-investigator) 2019 - 2022

“Targeting induced-senescent cells: a novel approach to promote spinal cord regeneration in mammals” (PI: Leonor Saúde)

Angelman Syndrome Alliance research grant (co-investigator) 2022 - 2024

“Stem cell toolkit for modelling cerebellar dysfunction in Angelman Syndrome” (PI: Simão Rocha)

FCT Project 2022.02195.PTDC (co-investigator) 2023, March - 2024, August

“New horizons for Rett syndrome: exploring the role of transposable elements using genetically engineered human stem cell models” (PI: Anne-Valerie Gendrel)

FCT Project 2022.03516.PTDC (co-investigator) 2023, March - 2024, August

“Studying accelerated cognitive decline upon aging in human derived cholinergic neurons” (PI: Luísa Lopes)

FCT Project PTDC/BIA-BID/1606/2020 (co-investigator) 2021, March - 2024, March

“A subcellular transcriptomics approach to study female gametogenesis” (PI: Rui Martinho)

FCT Project PTDC/MED-IMU/1988/2020 (co-investigator) 2021, March - 2024, March

“Regulating meningeal $\gamma\delta 17$ T cell homeostasis: Molecular mechanisms and pathophysiological implications” (PI: Julie Ribot)

FCT Project PTDC/MED-GEN/30895/2017 (co-investigator) 2019, March - 2022, March

“INnovating breast cancer GWAS through inTEgRation of functional GENomics” (PI: Joana Xavier)

FCT Project PTDC/BIA-MOL/29320/2017 (co-investigator) 2018, October - 2022, June

“Deciphering the epigenetic barriers of aging for iPSC reprogramming” (PI: Simão Rocha)

FCT Project PTDC/MED-ONC/28636/2017 (co-investigator) 2018, September - 2021, August

“Physiopathology and clinical implications of the RANK c.1386C-T (R450W) mutation in breast cancer patients” (PI: Sandra Casimiro)

FCT Project PTDC/MED-IMU/30948/2017 (co-investigator) 2018, June - 2021, June

“Programming anti-tumour myeloid cells to improve immunotherapy strategies” (PI: Karine Serre)

FCT Project PTDC/BIM-MED/3295/2014 (co-investigator 15%) 2016, May - 2019, April

“Angiocrine factors as modulators of spinal cord regeneration” (PI: Leonor Saúde)

FCT Project PTDC/EMS-SIS/0642/2014 (co-investigator 15%) 2016, June - 2019, December

“Personalizing cancer therapy through integrated modeling and decision” (PI: Susana Vinga)

FCT Project EXPL/EMS-SIS/1954/2013 (co-investigator 15%) 2014, April - 2015, September

“Multiscale modeling for personalized therapy of bone metastasis” (PI: Susana Vinga)

Publications

Pre-prints:

Sousa NS, Bica M, Bras MF, Antunes IB, Encarnacao IA, Costa T, Martins IB, Barbosa-Morais NL, Sousa-Victor P, Neves J. “The immune landscape of murine skeletal muscle regeneration and aging”. *bioRxiv*, 2023.11.07.565995; doi: <https://doi.org/10.1101/2023.11.07.565995>.

Moreno-Marin N, Marteil G, Fresmann NC, de Almeida BP, Dores K, Fragoso R, Cardoso J,

Pereira-Leal JB, Barata JT, Godinho S, Barbosa-Morais NL, Bettencourt-Dias M. “High prevalence and dependence of centrosome clustering in mesenchymal tumors and leukemia”. *bioRxiv*, 2023.03.13.532472; doi: <https://doi.org/10.1101/2023.03.13.532472>.

Journal Articles:

(key articles with highlighted numbering)

(60) Schneider AL*, Martins-Silva R*, Kaizeler A*, Saraiva-Agostinho N, Barbosa-Morais NL⁺. “voy-AGEr, free web interface for the analysis of age-related gene expression alterations in human tissues”. *eLife*, 2024 Mar 28;12:RP88623; doi: <https://doi.org/10.7554/eLife.88623>.

(59) Ascensão-Ferreira M*, Martins-Silva R*, Saraiva-Agostinho N, Barbosa-Morais NL⁺. “betAS: intuitive analysis and visualisation of differential alternative splicing using beta distributions”. *RNA*, 2024 Mar 18;30(4):337-353. doi: 10.1261/rna.079764.123. (⁺ corresponding author)

(58) Martins I, Neves-Silva D, Ascensao-Ferreira M, Dias AF, Ribeiro D, Isidro AF, Quiteria R, Paramos-de-Carvalho D, Barbosa-Morais NL, Saude L. “Mouse Spinal Cord Vascular Transcriptome Analysis Identifies CD9 and MYLIP as Injury-Induced Players”. *International Journal of Molecular Sciences*, 2023;**27**(7):6433.

(57) Goulielmaki E, Tsekrekou M, Batsiotos N, Ascensão-Ferreira M, Ledaki E, Stratigi K, Chatzinikolaou G, Topalis P, Kosteas T, Altmüller J, Demmers JA, Barbosa-Morais NL, Garinis GA. “The splicing factor XAB2 interacts with ERCC1-XPF and XPG for R-loop processing”. *Nature Communications*, 2021 May 26;**12**(1):3153.

(56) Conde J, Pumroy RA, Baker C, Rodrigues T, Guerreiro A, Sousa BB, Marques MC, de Almeida BP, Lee S, Leites EP, Picard D, Samanta A, Vaz SH, Sieglitz F, Langini M, Remke M, Roque R, Weiss T, Weller M, Liu Y, Han S, Corzana F, Morais VA, Faria CC, Carvalho T, Filippakopoulos P, Snijder B, Barbosa-Morais NL, Moiseenkova-Bell VY, Bernardes GJL. “Allosteric Antagonist Modulation of TRPV2 by Piperlongumine Impairs Glioblastoma Progression”. *ACS Central Science*, 2021 April 14;**7**(5):868-881.

(55) Bordone MC, Barbosa-Morais NL⁺. “Unraveling Targetable Systemic and Cell-Type-Specific Molecular Phenotypes of Alzheimer’s and Parkinson’s Brains With Digital Cytometry”. *Frontiers in Neuroscience*, 2020 Dec 9;**14**:607215. (⁺ corresponding author)

(54) Rathore OM, Silva RD, Ascensão-Ferreira M, Matos R, Carvalho C, Marques B, Tiago MN, Prudêncio P, Andrade RP, Roignant JY, Barbosa-Morais NL⁺, Martinho RG⁺. “NineTeen Complex-subunit Salsa is required for efficient splicing of a subset of introns and dorsal-ventral patterning”. *RNA Journal*, 2020 Dec;**26**(12):1935-1956. (⁺ corresponding author)

(53) Gomes I, de Almeida BP, Dâmaso S, Mansinho A, Correia I, Henriques S, Cruz-Duarte R, Vilhais G, Félix P, Alves P, Corredeira P, Barbosa-Morais NL, Costa L, Casimiro S. “Expression of receptor activator of NFκB (RANK) drives stemness and resistance to therapy in ER+HER2- breast cancer”. *Oncotarget*, 2020 May 12;**11**(19):1714-1728.

(52) Santos AF, Barbosa-Morais NL, Hurlburt BK, Ramaswamy S, Hemmings O, Kwok M, O’Rourke C, Bahnson HT, Cheng H, James L, Gould HJ, Sutton BJ, Maleki SJ, Lack G. “IgE to epitopes of Ara h 2 enhance the diagnostic accuracy of Ara h 2-specific IgE”. *Allergy*, 2020 Sep;**75**(9):2309-2318.

(51) Saraiva-Agostinho N⁺, Barbosa-Morais NL⁺. “Interactive alternative splicing analysis of human stem cells using psychomics”. *Methods in Molecular Biology*, 2020;**2117**:179-205. (⁺ corresponding author)

(50) Godinho-Silva C, Domingues RG, Rendas M, Raposo B, Ribeiro H, da Silva JA, Vieira A, Costa RM, Barbosa-Morais NL, Carvalho T, Veiga-Fernandes H. “Light-entrained and brain-tuned circadian circuits regulate ILC3s and gut homeostasis”. *Nature*, 2019 Oct;**574**(7777):254-258.

(49) Munkley J⁺, Ling L, Krishnan SRG, Hysenaj G, Scott E, Dalgliesh C, Oo HZ, Maia TM, Cheung K, Ehrmann I, Livermore KE, Zielinska H, Thompson O, Knight B, McCullagh P, McGrath J, Crundwell M, Harries LW, Daugaard M, Cockell S, Barbosa-Morais NL⁺, Oltean S⁺, Elliott DJ⁺. “Androgen-regulated transcription of ESRP2 drives alternative splicing patterns in prostate cancer”. *eLife*, 2019 Sep 3;8. pii: e47678. (⁺ corresponding author)

- (48) Rodrigues T, de Almeida BP, Barbosa-Morais NL, Bernardes GJL. “Dissecting celastrol with machine learning to unveil dark pharmacology”. *Chemical Communications*, 2019 May 30;**55**(45):6369-6372.
- (47) Baker C, Rodrigues T, de Almeida BP, Barbosa-Morais NL, Bernardes GJL. “Natural product-drug conjugates for modulation of TRPV1-expressing tumors”. *Bioorg Med Chem*, 2019 Jun 15;**27**(12):2531-2536.
- (46) de Almeida BP, Vieira AF, Paredes J, Bettencourt-Dias M, Barbosa-Morais NL⁺. “Pan-cancer association of a centrosome amplification gene expression signature with genomic alterations and clinical outcome”. *PLoS Computational Biology*, 2019 Mar 11;**15**(3):e1006832. (+ corresponding author)
- (45) Saraiva-Agostinho N⁺, Barbosa-Morais NL⁺. “psichomics: graphical application for alternative splicing quantification and analysis”. *Nucleic Acids Research*, 2019 Jan 25;**47**(2):e7. (+ corresponding author)
- (44) Braun S, Enculescu M, Setty S, Cortés-López M, de Almeida B, Sutandy FXR, Schulz L, Busch A, Seiler M, Ebersberger S, Barbosa-Morais N, Legewie S, König J, Zarnack K. “Decoding a cancer-relevant splicing decision in the RON proto-oncogene using high-throughput mutagenesis”. *Nat Commun*, 2018 Aug 17;**9**(1):3315.
- (43) Munkley J, Maia TM, Ibarluzea N, Livermore KE, Vodak D, Ehrmann I, James K, Rajan P, Barbosa-Morais NL, Elliott DJ. “Androgen-dependent alternative mRNA isoform expression in prostate cancer cells”. *F1000Res*, 2018 Aug 3;**7**:1189.
- (42) Georgilis A, Klotz S, Hanley CJ, Herranz N, Weirich B, Morancho B, Leote AC, D’Artista L, Gallego S, Seehawer M, Carroll T, Dharmalingam G, Wee KB, Mellone M, Pombo J, Heide D, Guccione E, Arribas J, Barbosa-Morais NL, Heikenwalder M, Thomas GJ, Zender L, Gil J. “PTBP1-Mediated Alternative Splicing Regulates the Inflammatory Secretome and the Pro-tumorigenic Effects of Senescent Cells”. *Cancer Cell*, 2018 Jul 9;**34**(1):85-102.e9.
- (41) Leznicki P, Natarajan J, Bader G, Spevak W, Schlattl A, Weidlich S, Rehman SAA, Zoepfel A, Bordone MC, Barbosa-Morais NL, Boehmelt G, Kulathu Y. “Expansion of DUB functionality through the production of alternative isoforms: USP35, a case study”. *Journal of Cell Science*, 2018 May 16;**131**(10). pii: jcs212753. doi: 10.1242/jcs.212753.
- (40) Marteil G, Guerrero A, Vieira AF, de Almeida BP, Machado P, Mendonça S, Mesquita M, Villarreal B, Fonseca I, Francia ME, Dores K, Martins NP, Jana SC, Tranfield EM, Barbosa-Morais NL, Paredes J, Pellman D, Godinho SA, Bettencourt-Dias M. “Over-elongation of centrioles in cancer promotes centriole amplification and chromosome missegregation”. *Nat Commun*, 2018 Mar 28;**9**(1):1258
- (39) Cardoso V, Chesne J, Ribeiro H, García-Cassani B, Carvalho T, Bouchery T, Shah K, Barbosa-Morais NL, Harris N, Veiga-Fernandes H. “Neuronal regulation of type 2 innate lymphoid cells via neuromedin U”. *Nature*, 2017 Sep 14;**549**(7671):277-281
- (38) Gallego-Paez LM, Bordone MC, Leote AC, Saraiva-Agostinho N, Ascensão-Ferreira M, Barbosa-Morais NL⁺. “Alternative splicing: the pledge, the turn and the prestige - The key role of alternative splicing in human biological systems”. *Human Genetics*, 2017 Sep;**136**(9):1015-1042 (+ corresponding author)
- (37) Rijo-Ferreira F, Pinto-Neves D, Barbosa-Morais NL, Takahashi JS, Figueiredo LM. “Trypanosoma brucei metabolism is under circadian control”. *Nat Microbiol*, 2017 Mar 13;**2**:17032
- (36) Liu Y, Noon AP, Cabeza EA, Shen J, Kuk C, Ilczynski C, Ni R, Sukhu B, Chan K, Barbosa-Morais NL, Hermanns T, Blencowe BJ, Azad A, van der Kwast TH, Catto JWF, Zlotta AR, Wrana JL. “Next generation RNA sequencing of archival formalin fixed paraffin embedded urothelial bladder cancer”. *Eur Urol*, 2014 Dec;**66**(6):982-6
- (35) Braunschweig U, Barbosa-Morais NL, Pan Q, Nachman EN, Alipahani B, Gonatopoulos-Pournatzis T, Frey B, Irimia M, Blencowe BJ. “Widespread intron retention in mammals functionally tunes transcripts”. *Genome Res*, 2014 Nov;**24**(11):1774-86
- (34) Pena AC, Pimentel MR, Manso H, Vaz-Drago R, Neves D, Aresta-Branco F, Ferreira FR, Guegan F, Coelho LP, Carmo-Fonseca M, Barbosa-Morais NL, Figueiredo LM. “Trypanosoma brucei histone H1 inhibits RNA polymerase I transcription and is important for parasite fitness in vivo”. *Mol Microbiol*, 2014

(33) Han H, Irimia M, Ross PJ, Sung HK, Alipanahi B, David L, Golipour A, Gabut M, Michael IP, Nachman EN, Wang E, Trcka D, Thompson T, O'Hanlon D, Slobodeniuc V, Barbosa-Morais NL, Burge CB, Moffat J, Frey BJ, Nagy A, Ellis J, Wrana JL, Blencowe BJ. "MBNL proteins repress ES-cell-specific alternative splicing and reprogramming". *Nature*, 2013 Jun 13;498(7453):241-5

(32) Ward MC, Wilson MD, Barbosa-Morais NL, Schmidt D, Stark R, Pan Q, Schwalie PC, Menon S, Lukk M, Watt S, Thybert D, Kutter C, Kirschner K, Flicek P, Blencowe BJ, Odom DT. "Latent Regulatory Potential of Human-Specific Repetitive Elements". *Mol Cell*, 2013 Jan 24;49(2):262-72

(31) Barbosa-Morais NL, Irimia M, Pan Q, Xiong HY, Gueroussov S, Lee LJ, Slobodeniuc V, Kutter C, Watt S, Çolak R, Kim T, Misquitta-Ali CM, Wilson MD, Kim PM, Odom DT, Frey BJ, Blencowe BJ. "The Evolutionary Landscape of Alternative Splicing in Vertebrate Species". *Science*, 2012 Dec 11;338(6114):1587-93

(30) Muralidhar B, Winder D, Murray M, Palmer R, Barbosa-Morais N, Saini H, Roberts I, Pett M, Coleman N. "Functional evidence that Drosha overexpression in cervical squamous cell carcinoma affects cell phenotype and microRNA profiles". *J Pathol*, 2011 Aug;224(4):496-507

(29) Ahmed AA, Lu Z, Jennings NB, Etemadmoghadam D, Capalbo L, Jacamo RO, Barbosa-Morais N, Le XF; Australian Ovarian Cancer Study Group, Vivas-Mejia P, Lopez-Berestein G, Grandjean G, Bartholomeusz G, Liao W, Andreeff M, Bowtell D, Glover DM, Sood AK, Bast RC Jr. "SIK2 is a centrosome kinase required for bipolar mitotic spindle formation that provides a potential target for therapy in ovarian cancer". *Cancer Cell*, 2010 Aug 9;18(2):109-21

(28) Dunning MJ, Curtis C, Barbosa-Morais NL, Caldas C, Tavaré S, Lynch AG.. "The importance of platform annotation in interpreting microarray data". *Lancet Oncol*, 2010 Aug;11(8):717

(27) Barbosa-Morais NL⁺, Dunning MJ, Samarajiva SA, Darot JFJ, Ritchie ME, Lynch AG, Tavaré S. "A re-annotation pipeline for Illumina BeadArrays: improving the interpretation of gene expression data". *Nucleic Acids Research*, 2010 Jan 1;38(3):e17 (+ corresponding author)

(26) Lynch AG, Dunning MJ, Iddawela M, Barbosa-Morais NL, Ritchie ME. "Considerations for the processing and analysis of GoldenGate-based two-colour Illumina platforms". *Statistical Methods in Medical Research*, 2009 Oct;18(5):437-52

(25) White V, Scarpini C, Barbosa-Morais NL, Ikele E, Carter S, Laskey RA, Miller R, Coleman N. "Isolation of stool-derived mucus provides a high yield of colonocytes suitable for early detection of colorectal carcinoma". *Cancer Epidemiology, Biomarkers & Prevention*, 2009 Jul;18(7):2006-13

(24) Dunning AM, Healey CS, Baynes C, Maia AT, Scollen S, Vega A, Rodriguez R, Barbosa-Morais NL, Ponder BAJ, et al. "Association of ESR1 gene tagging SNPs with breast cancer risk". *Human Molecular Genetics*, 2009 Mar 15;18(6):1131-9

(23) Wilson MD*, Barbosa-Morais NL*, Schmidt D, Conboy CM, Vanes L, Tybulewicz VLJ, Fisher EMC, Tavaré S, Odom DT. "Species-specific transcription in mice carrying human chromosome 21". *Science*, 2008 Oct 17;322(5900):434-438 (* equal contributions)

(22) Grosso AR, Gomes AQ, Barbosa-Morais NL, Caldeira S, Thorne NP, Grech G, von Lindern M, Carmo-Fonseca M. "Tissue-specific splicing factor gene expression signatures". *Nucleic Acids Research*, 2008 Sep;36(15):4823-32

(21) Dunning MJ, Ritchie ME, Barbosa-Morais NL, Tavaré S, Lynch AG. "A first spike-in validation of the Illumina specific Variance-Stabilizing Transformation". *BMC Research Notes*, 2008 Jun 4; 1:18

(20) Palmer RD, Barbosa-Morais NL, Gooding EL, Muralidhar B, Thornton CM, Pett MR, Roberts I, Schneider DT, Thorne N, Tavaré S, Nicholson JC, Coleman N; On behalf of The Childrens Cancer and Leukaemia Group (CCLG). "Pediatric malignant germ cell tumours show characteristic transcriptome profiles". *Cancer Research*, 2008 Jun 1;68(11):4239-47

(19) Dunning MJ, Barbosa-Morais NL, Lynch AG, Tavaré S, Ritchie ME. "Statistical issues in the analysis

of Illumina data". *BMC Bioinformatics*, 2008 Feb 6;**9**(1):85

(18) Driver K, Song S, Lesueur F, Ahmed S, Barbosa-Morais NL, Tyrer J, Ponder BAJ, Easton DF, Pharoah PDP, Dunning AM, for the SEARCH Team. "Association of single-nucleotide polymorphisms in the Cell Cycle genes with breast cancer in the British population". *Carcinogenesis*, 2008 Feb;**29**(2):333-41

(17) Conboy CM, Spyrou C, Thorne NP, Wade EJ, Barbosa-Morais NL, Wilson MD, Bhattacharjee A, Young RA, Tavaré S, Lees JA, Odom DT. "Cell cycle genes are the evolutionarily conserved targets of the E2F4 Transcription Factor". *PLoS ONE*. 2007 Oct 24;**2**(10):e1061

(16) Chin SF, Teschendorff AE, Marioni JC, Wang Y, Barbosa-Morais NL, Thorne NP, Costa JL, Pinder SE, van de Wiel MA, Green AR, Ellis IO, Porter PL, Tavaré S, Brenton JD, Ylstra B, Caldas C. "High-resolution array-CGH and expression profiling identifies a novel genomic subtype of ER negative breast cancer". *Genome Biol*. 2007 Oct 9;**8**(10):R215

(15) Blenkiron C, Goldstein LD, Thorne NP, Spiteri I, Chin SF, Dunning MJ, Barbosa-Morais NL, Teschendorff AE, Green AR, Ellis IO, Tavaré S, Caldas C, Miska EA. "MicroRNA expression profiling of human breast cancer identifies new markers of tumour subtype". *Genome Biol*. 2007 Oct 8;**8**(10):R214

(14) Massie CE, Adryan B, Barbosa-Morais NL, Lynch AG, Tran M, Neal DE, Mills IG. "Novel Androgen Receptor genomic targets reveal an interaction with the ETS1 transcription factor". *EMBO Rep*. 2007 Sep;**8**(9):871-8

(13) Muralidhar B, Goldstein LD, Ng G, Winder DM, Palmer RD, Gooding EL, Barbosa-Morais NL, Mukherjee G, Thorne NP, Roberts I, Pett MR, Coleman N. "Global microRNA profiles in cervical squamous cell carcinoma depend on Drosha expression levels". *J Pathol*. 2007 Aug;**212**(4):368-77

(12) Gama-Carvalho M, Barbosa-Morais NL, Brodsky AS, Silver PA, Carmo-Fonseca M. "Genome wide identification of functionally distinct subsets of cellular mRNAs associated with two nucleocytoplasmic-shuttling mammalian splicing factors". *Genome Biol*. 2006 Nov 30;**7**(11):R113

(11) Teschendorff AE, Naderi A, Barbosa-Morais NL, Pinder SE, Ellis IO, Aparicio S, Brenton JD, Caldas C. "A consensus prognostic gene expression classifier for ER positive breast cancer". *Genome Biol*. 2006 Oct 31;**7**(10):R101

(10) Mollet I, Barbosa-Morais NL, Andrade J, Carmo-Fonseca M. "Diversity of human U2AF splicing factors". (Review) *FEBS J*, 2006 Nov;**273**(21):4807-16

(9) Ibrahim AEK, Thorne NP, Baird K, Barbosa-Morais NL, Tavaré S, Collins VP, Wyllie AH, Arends MJ, Brenton JD. "MMASS: an optimised array-based method for assessing CpG island methylation". *Nucleic Acids Res*. 2006;**34**(20):e136

(8) Chin SF, Wang Y, Thorne NP, Teschendorff AE, Pinder SE, Vias M, Naderi A, Roberts I, Barbosa-Morais NL, Garcia MJ, Iyer NG, Kranjac T, Robertson JF, Aparicio S, Tavaré S, Ellis I, Brenton JD, Caldas C. "Using array-CGH to define molecular portraits of primary breast cancer". *Oncogene*, 2007 Mar 22;**26**(13):1959-70

(7) Naderi A, Teschendorff AE, Barbosa-Morais NL, Pinder SE, Green AR, Powe DG, Robertson JF, Aparicio S, Ellis IO, Brenton JD, Caldas C. "A gene-expression signature to predict survival in breast cancer across independent data sets". *Oncogene*, 2007 Mar 1;**26**(10):1507-16

(6) Teschendorff AE, Naderi A, Barbosa-Morais NL, Caldas C. "PACK: Profile Analysis using Clustering and Kurtosis to find molecular classifiers in cancer". *Bioinformatics*, 2006 Sep 15;**22**(18):2269-75

(5) Stamm S, Riethoven JJ, Le Texier V, Gopalakrishnan C, Kumanduri V, Tang Y, Barbosa-Morais NL, Thanaraj TA. "ASD: a bioinformatics resource on alternative splicing". *Nucleic Acids Res*, 2006 Jan 1;**34**(Database issue):D46-55

(4) Barbosa-Morais NL, Carmo-Fonseca M, Aparicio S. "Systematic genome-wide annotation of spliceosomal proteins reveals differential gene family expansion". *Genome Res*, 2006 Jan;**16**(1):66-77

- (3) Teschendorff AE, Wang Y, Barbosa-Morais NL, Brenton JD, Caldas C. “A variational Bayesian mixture modelling framework for cluster analysis of gene-expression data”. *Bioinformatics*, 2005 Jul;**21**(13):3025-33
- (2) Pacheco TR, Gomes AQ, Barbosa-Morais NL, Benes V, Ansorge W, Wollerton M, Smith CW, Valcarcel J, Carmo-Fonseca M. “Diversity of vertebrate splicing factor U2AF³⁵: identification of alternatively spliced U2AF1 mRNAs”. *J Biol Chem*, 2004 Jun 25;**279**(26):27039-49
- (1) Naderi A, Ahmed AA, Barbosa-Morais NL, Aparicio S, Brenton JD, Caldas C. “Expression microarray reproducibility is improved by optimising purification steps in RNA amplification and labelling”. *BMC Genomics*, 2004 Jan 30;**5**(1):9

Book chapters:

Lynch AG, Smith ML, Dunning MJ, Cairns JM, Barbosa-Morais NL, Tavaré S. “beadarray, BASH and HULK - tools to increase the value of Illumina BeadArray experiments”. In A. Gusnato, K.V. Mardia, & C.J. Fallaize (eds), *Statistical Tools for Challenges in Bioinformatics*, 2009 pp33-37. Leeds, Leeds University Press

Non-refereed Contributions:

Handbook of Circuit Theory and Fundamentals of Electronics

José Epifânio da Franca & Nuno Morais

Secção de Folhas, Associação de Estudantes do Instituto Superior Técnico - 1999, 2000, 2001

Editorial and Refereeing

Associate Editor for *BMC Bioinformatics* (2010–2022) and *BMC Cancer* (2010–2021).

Reviewer for *Aging*, *Ageing Research Reviews*, *Bioinformatics*, *Biological Reviews*, *Briefings in Bioinformatics*, *BMC Bioinformatics*, *BMC Cancer*, *BMC Genomics*, *eLife*, *EMBO Journal*, *Epigenomics*, *Frontiers in Medicine*, *Genome Biology*, *Genome Research*, *Integrative and Comparative Biology*, *International Reviews of Cell and Molecular Biology*, *Life Sciences*, *Molecular Systems Biology*, *Molecular Therapy - Nucleic Acids*, *Nature Communications*, *Nature Structural and Molecular Biology*, *npj Genomic Medicine*, *Nucleic Acids Research*, *NAR Genomics and Bioinformatics*, *PLoS Computational Biology*, *PLoS One*, *Review Commons*, *RNA Biology*, *RNA Journal*, *Scientific Reports*, *Stem Cells* and *Trends in Genetics*.

Grant reviewer for the Biotechnology and Biological Sciences Research Council (BBSRC) UK, the Medical Research Council (MRC) UK, Worldwide Cancer Research (WWCR) UK, The French National Research Agency (ANR), the Israel Science Foundation (ISF), the National Science Centre Poland, and Fundação para a Ciência e a Tecnologia (FCT) Portugal.

Supervision

Postdoc:

- . Jacek Marzec, Co-Lab AccelBio lead computational biologist
Instituto de Medicina Molecular, Lisbon, Portugal 2023, January -
- . Joana Xavier, FCT Postdoctoral Fellow [co-supervisor]
Maia Lab, Centre for Biomedical Research, University of Algarve, Portugal 2015 - 2018
(main supervisor: Ana Teresa Maia)
- . Lina Gallego, UNESCO-L’Oreal International Fellow (For Women in Science Program)
Instituto de Medicina Molecular, Lisbon, Portugal 2015, July - 2018, March
- . Teresa Maia
Instituto de Medicina Molecular, Lisbon, Portugal 2016, November - 2017, June

PhD supervisor:

- . Francisca Xara-Brasil, LisbonBioMed PhD Program
Instituto de Medicina Molecular, Lisbon, Portugal 2023, March -
- . Alexandre Afonso, LisbonBioMed PhD Program
Instituto de Medicina Molecular, Lisbon, Portugal 2022, March -

. Rita Silva, LisbonBioMed PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2022, March -

. Marta Bica, FCT PhD Fellow
 Instituto de Medicina Molecular, Lisbon, Portugal 2021, May -

. Nuno Agostinho, FCT PhD Fellow
 Instituto de Medicina Molecular, Lisbon, Portugal 2017, September - 2023, May

. Joel Indi, Graduate Programme Science for Development (PGCD) [co-supervisor]
 Instituto de Medicina Molecular, Lisbon, Portugal 2017, June -

(main supervisor: Eduardo Eyra)

. Mariana Ferreira, LisbonBioMed PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2017, March -

. Marie Bordone, LisbonBioMed PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2015, March - 2021, March

. Marta Amorim, CAML PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2014, April - 2016, August

(co-supervised with Sérgio Dias and Pedro Castelo Branco)

PhD thesis committee member:

. Marta Andolfato, LisbonBioMed PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2022 -

. Eller Conti, LisbonBioMed PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2022 -

. Jean-Christophe Lone, CAML PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2021 -

. Bárbara Teixeira, LisbonBioMed PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2021 -

. Rui Bernardino
 NOVA Medical School, Lisbon, Portugal 2021 -

. Beatriz Silva, CAML PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2021 -

. Inês Mendes, CAML PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2021 - 2023

. Rafael Mamede, CAML PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2021, January -

. Ana Alão Freitas
 ITQB NOVA, Oeiras, Portugal 2020, January -

. Ana Carolina Peixoto, PhD in Biomedical Engineering
 Instituto Superior Técnico, Lisbon, Portugal 2018 - 2022

. Federica Mantica
 CRG / Universitat Pompeu Fabra, Barcelona, Spain 2018, November - 2023, May

. Inês Faleiro, LisbonBioMed PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2018, March -

. Rita Soares, LisbonBioMed PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2017, March - 2023, May

. Saumya Dileep Kumar, Enlight-ten / Marie Skłodowska-Curie Project
 Instituto de Medicina Molecular, Lisbon, Portugal 2016, May - 2022, February

. Helena Brigas, LisbonBioMed PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2016, March - 2020, June

. Vasco Conceição, LisbonBioMed PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2015, March - 2020, January

. Bruno Gonçalves, CAML PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2015, January -

. André Veríssimo, PhD in Information Systems and Computer Engineering
 Instituto Superior Técnico, Lisbon, Portugal 2014 - 2021

. Hugo Santos, BioSys PhD Program
 Faculty of Sciences, University of Lisbon, Portugal 2014 - 2015

. Fernando Martins, CAML PhD Program
 Instituto de Medicina Molecular, Lisbon, Portugal 2013 - 2015

Masters thesis supervisor:

. Miguel Casanova, Masters in Bioinformatics and Computational Biology

Faculty of Sciences, University of Lisbon, Portugal *2020, October -*
. José Ferrão, Masters in Bioinformatics and Computational Biology
Faculty of Sciences, University of Lisbon, Portugal *2020, October - 2024, February*
. Rita Silva, Masters in Biomedical Engineering
Instituto Superior Técnico, Lisbon, Portugal *2021, February - November*
. Arthur Schneider, Masters in Biotechnology
Instituto Superior Técnico, Lisbon, Portugal *2018, October - 2019, October*
. Marta Bica, Masters in Bioinformatics and Computational Biology
Faculty of Sciences, University of Lisbon, Portugal *2018, July - 2019, October*
. Sara Rodrigues Mendes, Masters in Biopharmaceutical Sciences
Faculty of Pharmacy, University of Lisbon, Portugal *2018, July - 2020, February*
. Nora Fresmann, Masters in Molecular Life Science
Humboldt University, Berlin, Germany *2018, February - October*
. Bernardo Almeida, Masters in Oncobiology
University of Algarve, Portugal *2016, September - 2017, December*
. Mariana Ferreira, Masters in Biomedical Engineering
Instituto Superior Técnico, Lisbon, Portugal *2016, February - October*
. Ana Carolina Leote, Masters in Biological Engineering
Instituto Superior Técnico, Lisbon, Portugal *2016, February - October*
. Teresa Maia, Masters in Bioinformatics and Computational Biology
Faculty of Sciences, University of Lisbon, Portugal *2015, September - 2016, October*
. Nuno Agostinho, Masters in Informatics
Faculty of Sciences, University of Lisbon, Portugal *2015, September - 2016, October*
. Bárbara Caravela, Masters in Biomedical Engineering
Instituto Superior Técnico, Lisbon, Portugal *2015*
(co-supervised with Susana Vinga and Alexandra Carvalho)
. Pedro Faria, Masters in Biomedical Engineering
Instituto Superior Técnico, Lisbon, Portugal *2014*
(co-supervised with Susana Vinga and Alexandra Carvalho)

Other:

. Claudia Cifuentes, visiting PhD student from CBM-UAM Madrid
Instituto de Medicina Molecular, Lisbon, Portugal *2022, September - November*
. Rita Belo, GenomePT Fellow
Instituto de Medicina Molecular, Lisbon, Portugal *2020, March - 2021, December*
. Ana Sofia Borges, trainee
Instituto de Medicina Molecular, Lisbon, Portugal *2019, March - 2020, January*
. Javier Tapial, visiting PhD student from CRG Barcelona
Instituto de Medicina Molecular, Lisbon, Portugal *2018, April - June*
. Juan Carlos Gomez Verjan, visiting PhD student from UNAM Mexico
Instituto de Medicina Molecular, Lisbon, Portugal *2016, April - July*
. Mariana Ferreira, summer trainee (IST Masters in Biomedical Engineering)
Instituto de Medicina Molecular, Lisbon, Portugal *2015, July - September*
. Julie Addison, summer project of MPhil in Computational Biology
University of Cambridge, UK *2007*

Teaching/training experience

Graduation programmes - Lecturer:

Computational Biology Course (responsible for 20%) *2019 - present*
Masters in Biomedical Engineering, Instituto Superior Técnico, Lisbon, Portugal

Bioinformatics Course (coordinator) *2018 - present*
Masters in Oncobiology + Biomedical Research, Faculty of Medicine of the University of Lisbon, Portugal

“Human transcriptomes and cognitive biases”
PhD Programs Plants for Life and Molecular Biosciences, ITQB Oeiras, Portugal *2024, February 6*

“Computational biology and what transcriptomes tell us about disease”

LisbonBioMed PhD Program, Instituto de Medicina Molecular, Portugal	<i>2024, January 9</i>
LisbonBioMed PhD Program, Instituto de Medicina Molecular, Portugal	<i>2023, January 10</i>
LisbonBioMed PhD Program, Instituto de Medicina Molecular, Portugal	<i>2022, February 17</i>
LisbonBioMed PhD Program, Instituto de Medicina Molecular, Portugal	<i>2021, April 26</i>
LisbonBioMed PhD Program, Instituto de Medicina Molecular, Portugal	<i>2020, March 3</i>
“Neuroethics - Biases and incentives in the quest for reproducible science”	
Masters in Neurosciences, Faculty of Medicine of the University of Lisbon, Portugal	<i>2023, December 19</i>
“Bioinformatics - Computational biology in the translation of cancer 'omics”	
Masters in Biomedical Research, NOVA Medical School, Lisbon, Portugal	<i>2023, October 10</i>
Masters in Biomedical Research, NOVA Medical School, Lisbon, Portugal	<i>2022, October 17</i>
Masters in Biomedical Research, NOVA Medical School, Lisbon, Portugal	<i>2021, October 12</i>
Masters in Biomedical Research, NOVA Medical School, Lisbon, Portugal	<i>2020, October 14</i>
Masters in Biomedical Research, NOVA Medical School, Lisbon, Portugal	<i>2019, October 18</i>
Masters in Biopharmaceutical Sciences and Integrated Masters in Pharmaceutical Sciences, Faculty of Pharmacy of the University of Lisbon, Portugal	<i>2019, May 8</i>
Masters in Biomedical Research, NOVA Medical School, Lisbon, Portugal	<i>2018, October 8</i>
Masters in Biopharmaceutical Sciences and Integrated Masters in Pharmaceutical Sciences, Faculty of Pharmacy of the University of Lisbon, Portugal	<i>2018, April 5</i>
Masters in Biomedical Research, NOVA Medical School, Lisbon, Portugal	<i>2018, January 5</i>
“Applied Computational Multi-Omics - Biologist-intelligible alternative splicing analysis of RNA-seq data”	
Masters in Computational Biology & Bioinformatics, NOVA Lisbon, Portugal	<i>2023, April 3</i>
Masters in Computational Biology & Bioinformatics, NOVA Lisbon, Portugal	<i>2022, April 11</i>
“What (single cell) transcriptomes tell us about human disease”	
PhD Programs Plants for Life and Molecular Biosciences, ITQB Oeiras, Portugal	<i>2023, February 7</i>
PhD Programs Plants for Life and Molecular Biosciences, ITQB Oeiras, Portugal	<i>2022, February 8</i>
Masters in Biological Engineering, Instituto Superior Técnico, Lisbon, Portugal	<i>2022, January 31</i>
Computational Biology in Cancer module - Single cell transcriptomics	
Int. Neuroscience & Cancer Doctoral Programme, Champalimaud F., Lisbon, Portugal	<i>2022, November 9</i>
“Perspectives in Computational Biology - What transcriptomic data tell us about ageing”	
Masters in Computational Biology & Bioinformatics, NOVA Lisbon, Portugal	<i>2022, October 14</i>
Masters in Computational Biology & Bioinformatics, NOVA Lisbon, Portugal	<i>2021, November 19</i>
“Computational biology in the translation of disease 'omics”	
Masters in Biopharmaceutical Sciences and Integrated Masters in Pharmaceutical Sciences, Faculty of Pharmacy of the University of Lisbon, Portugal	<i>2021, March 15</i>
Masters in Biopharmaceutical Sciences and Integrated Masters in Pharmaceutical Sciences, Faculty of Pharmacy of the University of Lisbon, Portugal	<i>2020, April 24</i>
Masters in Molecular Technologies in Health, Lisbon School of Health Technology, Portugal	<i>2020, April 23</i>
“What transcriptomes tell us about diseases”	
PhD Program in Molecular Biosciences, ITQB Oeiras, Portugal	<i>2021, February 9</i>
“What transcriptomes tell us about ageing and associated diseases”	
PhD Programs Plants for Life and Molecular Biosciences, ITQB Oeiras, Portugal	<i>2019, October 8</i>
“Computational biology and disease transcriptomics”	
LisbonBioMed PhD Program, Instituto de Medicina Molecular, Portugal	<i>2018, January 9</i>
LisbonBioMed PhD Program, Instituto de Medicina Molecular, Portugal	<i>2017, January 10</i>
LisbonBioMed PhD Program, Instituto de Medicina Molecular, Portugal	<i>2016, January 5</i>
Bioinformatics Course (coordinator)	
PGCD, Graduate Program Science for Development, University of Cape Verde	<i>2017, February 6-10</i>
PGCD, Graduate Program Science for Development, University of Cape Verde	<i>2016, February 22-26</i>
“Biologia Computacional: splicing & cancro”	
	<i>2016, October 29</i>

Masters in Oncobiology, Faculty of Medicine of the University of Lisbon, Portugal

“RNA-Seq and disease transcriptomics”

FCT PhD Programme - Medicines and Pharmaceutical Innovation (i3DU), Faculty of Pharmacy of the University of Lisbon, Portugal *2015, September 15*

“Analysis of Transcriptional Regulation and RNA Processing from RNA-Seq Data”

Masters in Bioinformatics and Computational Biology, Faculty of Sciences of the University of Lisbon, Portugal *2015, July 23*

LisbonBioMed PhD Program, Instituto de Medicina Molecular, Portugal *2015, January 7*

Masters in Bioinformatics and Computational Biology, Faculty of Sciences of the University of Lisbon, Portugal *2014, July 17*

PhD Program in BioEngineering - Cell Therapies & Regenerative Medicine, Instituto de Medicina Molecular, Portugal *2014, April 17*

LisbonBioMed PhD Program, Instituto de Medicina Molecular, Portugal *2014, February 27*

R and Bioconductor Workshop (Computational Biology course)

Masters in Biomedical Sciences, University of Algarve, Faro, Portugal *2015, April 21-22*

“Alternative splicing in evolution and cancer”

PhD Program in Integrative Biology and Biomedicine, Instituto Gulbenkian de Ciência, Oeiras, Portugal *2015, January 30*

“The evolutionary landscape of alternative splicing in vertebrate species” *2013, July 25*

Masters in Bioinformatics and Computational Biology, Faculty of Sciences of the University of Lisbon, Portugal

Functional Genomics course *2007/2008, 2008/2009, 2009/2010*

MPhil in Computational Biology, DAMTP, University of Cambridge, UK

Systems Biology course - Engineering for Life Sciences *2009, 2010*

Engineering Tripos, University of Cambridge, UK

Course in “Microarray Data Analysis using R and BioConductor” *2010, January 11-12*

M1GPBIDM option Biotechnology, University of Poitiers, France

Bioinformatics module - Course in “Regulation of Gene Expression” *2009, April 13-17*

GABBA Program (IBMC, Porto), Faculty of Sciences, University of Lisbon, Portugal

Course in “Analysis of DNA expression microarrays” *2009, March 11-13*

PhD Programme in Computational Biology, Instituto Gulbenkian de Ciência, Oeiras, Portugal

“Splicing & Bioinformatics” module - Course in “mRNA biogenesis”

Gulbenkian PhD Programme in Biomedicine, Instituto Gulbenkian de Ciência, Oeiras, Portugal *2003, October 14-17 & 2004, October 13-19*

“Splicing & Bioinformatics” module - Course in “Genetic Evolution” *2004, March 15-19*

GABBA Program, Institute for Molecular and Cell Biology, Porto, Portugal

High-throughput Data Analysis Courses - Lecturer / Instructor:

Statistical modelling for splicing analyses *2022, June 23*

RiboMed Summer School on Modelling Biological Data, Instituto de Medicina Molecular, Portugal

CAJAL advanced neuroscience course in “Ageing Cognition” *2021, September 30 - October 8*

Bordeaux School of Neuroscience, France

NGS Data Analysis, RNAseq, ChIPseq *2016, March 30-31*

Instituto Gulbenkian de Ciência, Oeiras, Portugal

X Summer Bioinformatics Course *2014, January 30-31*

Ribeirão Preto Medical School, University of São Paulo, Brazil

Microarray Data Analysis using R and Bioconductor
Instituto Gulbenkian de Ciência, Oeiras, Portugal 2010, September 6-10
Department of Genetics, University of Cambridge, UK 2010, February 24-26
Instituto Gulbenkian de Ciência, Oeiras, Portugal 2009, September 14-18
Department of Genetics, University of Cambridge, UK 2009, June 1-3
University of Oslo, Norway 2008, December 1-3
Instituto Gulbenkian de Ciência, Oeiras, Portugal 2008, September 29 - October 3

Microarray and high throughput sequencing data analysis with Bioconductor 2010, February 2
European Bioinformatics Institute, Hinxton, Cambridgeshire, UK

EMBO Practical Course on Analysis and Informatics of Microarray Data 2009, October 12-17
European Bioinformatics Institute, Hinxton, Cambridgeshire, UK

Hands-on training at EBI - Transcriptomics 2009, January 19-22
European Bioinformatics Institute, Hinxton, Cambridgeshire, UK

Aveiro Molecular Genomics, advanced course on mRNA profiling using DNA microarrays 2008, July 21-25
University of Aveiro, Portugal

Hands-on training at EBI - Transcriptomics 2008, January 29
European Bioinformatics Institute, Hinxton, Cambridgeshire, UK

Introductory Course on Microarray Data Analysis 2007, October 15-19
Instituto Gulbenkian de Ciência, Oeiras, Portugal

Four 3-day introductory microarray analysis courses 2007, April - 2008, February
Cancer Research Institute, Cambridge, UK

“R and Bioconductor” module - Microarray Data Analysis Course 2007, May 24
The Norwegian Microarray Consortium, University of Oslo, Norway

“Microarray Technology and Bioinformatics” Summer School 2006, August 28-September 1
University of Camerino, Italy

Other:

Teaching/research assistant - Circuit Theory & Fundamentals of Electronics 1999-2001
Instituto Superior Técnico - Technical University of Lisbon, Portugal

Lecture on Physics and Chemistry to secondary school students 1998
Monserrate Secondary School, Viana do Castelo, Portugal

Technology Transfer

Hosting of computational multi-omics work of collaborative laboratory AccelBio 2023-

Sponsored Research Agreement with Limm Therapeutics SA 2020-2022

“Methods of cancer treatment”. Intellectual Patent Office UK, Provisional Patent Application GB 1820975.9. Authors: Nuno Barbosa-Morais, Bernardo de Almeida, Mónica Bettencourt-Dias, Joana Paredes, André Vieira 2018

Invited Talks

Disease transcriptomes and cognitive biases
Neuroscience Seminar Series, iMM Lisbon, Portugal 2023, November 7

<u>What transcriptomes tell us about ageing and associated diseases</u>	
Center for Neuroscience and Cell Biology, University of Coimbra, Portugal	2023, September 22
Center of Biological Engineering, University of Minho, Braga, Portugal	2020, January 20
<u>What makes a good computational biologist?</u>	
InSlicoClub@UCIBIO, Portugal	2023, June 27
<u>Biologia computacional no estudo do que os transcritomas nos dizem sobre doenças</u>	
O que há de novo no Centro Académico de Medicina de Lisboa, Portugal	2023, March 30
<u>Finding molecular regulators of response to stress and senescence by intelligible analyses of transcriptomes</u>	
Department of Biology, University of Minho, Braga, Portugal	2022, November 15
<u>Bioinformatic analyses of human transcriptomes made intelligible to biologists</u>	
iBiMED - Institute of Biomedicine, University of Aveiro, Portugal	2021, November 19
<u>Computational biology in the translation of disease "omics"</u>	
Department of Bioengineering, Instituto Superior Técnico, Lisbon, Portugal	2021, May 25
<u>Making biological big data intelligible to yourself and others</u>	
Kiel Evolution Center, University of Kiel, Germany	2021, April 21
<u>What transcriptomes tell us about diseases</u>	
iBiMED - Institute of Biomedicine, University of Aveiro, Portugal	2020, November 18
<u>What transcriptomic data tell us about disease</u>	
Data Science Portugal, TalkDesk Lisbon, Portugal	2020, January 16
<u>What transcriptomes tell us about disease</u>	
Department of Bioengineering, Instituto Superior Técnico, Lisbon, Portugal	2019, May 21
MRC London Institute of Medical Sciences, UK	2018, July 25
Department of Bioengineering, Instituto Superior Técnico, Lisbon, Portugal	2018, May 22
ITQB, Oeiras, Portugal	2018, February 6
<u>Bioinformatics in the translation of cancer transcriptomics</u>	
Biozentrum, University of Basel, Switzerland	2019, May 13
V Semana da Bioengenharia, Instituto Superior Técnico, Lisbon, Portugal	2019, March 18
<u>Computational biology and what transcriptomes tell us about disease</u>	
Prossyga 2018, Porto, Portugal	2018, May 12
<u>Computational biology in the translation of cancer "omics"</u>	
ReTuBi Joint Summer School, Lisbon, Portugal	2017, May 29
<u>Computational biology, splicing, evolution and cancer</u>	
IHMT PhD students Retreat, Sesimbra, Portugal	2017, May 28
<u>Alternative splicing landscapes of ageing and neurodegeneration</u>	
CEDOC, Lisbon, Portugal	2017, April 5
<u>Computational Biology: splicing in evolution and disease</u>	
X Encontro Nacional dos Estudantes de Engenharia Biomédica, Coimbra, Portugal	2017, March 3
<u>Profiling alternative splicing in evolution and disease</u>	
International Institute of Molecular and Cell Biology in Warsaw, Poland	2017, January 19
2016 Summer School in Computational Biology, University of Coimbra, Portugal	2016, September 7
<u>My way into Computational Biology</u>	
Career Path Day, International Institute of Molecular and Cell Biology in Warsaw, Poland	2017, January 19

<u>Gene splicing in evolution and disease</u>	Department of Physics, Instituto Superior Técnico, Lisbon, Portugal	2016, November 2
<u>Gene expression profile of Kidney Tumors</u>	Novartis Oncology Advanced RCC Preceptorship, Lisbon, Portugal	2016, October 27
<u>Alternative splicing landscapes of cancer</u>	Instituto Português de Oncologia, Lisbon, Portugal	2016, October 12
<u>Science & Creativity</u>	RedeValor Conference, Rectory, University of Lisbon, Portugal	2016, May 6
<u>Alternative splicing and the dynamics of genomes' coding potential</u>	1st BioSAM, Faculty of Sciences, University of Lisbon, Portugal	2016, April 17
<u>Biologia Computacional: splicing e cancro</u>	IV Jornadas de Bioengenharia, Universidade da Beira Interior, Covilhã, Portugal	2016, March 3
<u>Computational Biology in the study of Alternative Splicing in Cancer</u>	II Semana da Bioengenharia, Instituto Superior Técnico, Lisbon, Portugal	2016, March 2
<u>Biologia Computacional no estudo do splicing alternativo em cancro</u>	O que há de novo no Centro Académico de Medicina de Lisboa, Portugal	2016, January 28
<u>Biologia Computacional: Splicing, Evolução e Cancro</u>	Conversas: Oncobiologia, Núcleo de Biologia Celular e Molecular, FCT NOVA, Portugal	2015, December 2
	IX Jornadas de Engenharia Biológica, Instituto Superior Técnico, Lisbon, Portugal	2014, March 18
<u>Alternative splicing in evolution and cancer</u>	ICVS - Life and Health Sciences Research Institute, Braga, Portugal	2015, April 27
<u>Alternative splicing landscapes in clear cell renal cell carcinomas reveal novel candidate markers for prognosis</u>	The 4th Global Cancer Genomics Consortium Symposium, Kyoto University, Japan	2014, November 14
<u>Bioinformática: a nova era</u>	III Jornadas de Bioengenharia, Universidade da Beira Interior, Covilhã, Portugal	2014, May 28
<u>Analysis of Transcriptional Regulation and RNA Processing from RNA-Seq Data</u>	Instituto Gulbenkian de Ciência, Oeiras, Portugal	2014, May 12
	Bioinformatics Open Days, University of Minho, Braga, Portugal	2014, February 28
	Statistics Department, Campinas State University (UNICAMP), Brazil	2014, February 3
	Computational Biology and Bioinformatics Seminars, IMM Lisbon, Portugal	2013, October 30
	The 3rd Global Cancer Genomics Consortium Symposium: From Oncogenomics To Cancer Care - Teaching Workshop, IMM Lisbon, Portugal	2013, September 18
<u>Studying the evolution of tissue-specific alternative splicing using RNA-Seq data</u>	Toronto Bioinformatics User Group Trainee Seminar, Canada	2013, April 24
<u>The evolutionary landscape of alternative splicing in vertebrate species</u>	Weatherall Institute of Molecular Medicine, Oxford, UK	2013, March 26
	Cheriton School of Computer Science, University of Waterloo, Canada	2013, March 13
	Institute of Molecular Medicine, Lisbon, Portugal	2012, December 20
	BioFIG Seminar - Faculty of Sciences, University of Lisbon, Portugal	2012, December 19
<u>Marie Curie International Fellowships - Case Study</u>	Seminar Day - European Programmes for Higher Education and Research: Opportunities for Canadian Institutions, Toronto, Canada	2011, November 8
<u>The Illumina Code: are microarrays telling you the whole truth about cancer?</u>	5th CFGBC Symposium "From Array to Understanding Diseases", Ljubljana, Slovenia	2010, June 16
	Friedrich Miescher Institute for Biomedical Research, Basel, Switzerland	2010, May 4

2nd Annual ENBDC Workshop, Weggis, Switzerland 2010, April 23

Of trisomic mice and illuminated men (job talk)
Harvard Medical School, Boston, MA, USA 2009, December 15
Koshland Hall, U.C. Berkeley, CA, USA 2009, December 9
The Donnelly Centre, University of Toronto, Canada 2009, December 4
Whitehead Institute for Biomedical Research, Cambridge, MA, USA 2009, December 3

Computational Epigenetics
Bioinformatics in Genomic and Proteomic Data Conference, Brno, Czech Republic 2009, November 26

Determinants of tissue-specific transcriptional regulation in a transplanted chromosome
BioFIG/GABBA Workshop on Gene Expression: From Genes to Systems, Faculty of Sciences, University of Lisbon, Portugal 2009, April 15
University College London, UK 2009, February 18
University of East Anglia, Norwich, UK 2009, February 6
Department of Biology, University of Aveiro, Portugal 2008, July 22

História(s) da Bioinformática
Engineering Faculty, Portuguese Catholic University, Lisbon, Portugal 2008, October 2

Computational biology: microarrays and beyond (replacing and on behalf of Simon Tavaré)
Workshop “Microarrays in Clinical Oncology - promises and pitfalls”, Sociedade de Ciências Médicas, Lisbon, Portugal 2007, June 30

Differential expansion of splicing factors families in eukaryotes
Medical Research Council - Biostatistics Unit, Cambridge, UK 2006, March 15

Bioinformatics: sequence analysis and applications
Department of Histopathology and Cytology, University of Cambridge, UK 2006, March 15

Splicing & Bioinformatics
FCUL Grad. Program in Biophysics and Biomedical Engineering, IMM, Lisbon, Portugal 2004, January 7
Theoretical Immunology Group, Instituto Gulbenkian de Ciência, Oeiras, Portugal 2002, December 12
ALGOS Group, Instituto de Engenharia de Sistemas e Computadores, Lisbon, Portugal 2002, December 3

História(s) da Biofísica
6ª Semana da Física (NFIST), Instituto Superior Técnico, Lisbon, Portugal 2002, October 17

Participation in Meetings

Organization:

EMBO Young Scientists Forum 2023, October 12-13
Instituto de Medicina Molecular, Lisbon, Portugal

RiboMed Satellite Conference on RNA in Disease 2022, July 12
Lisbon Congress Centre, Portugal

Workshop “Microarrays in Clinical Oncology - promises and pitfalls” (co-organizer) 2007, June 30
Sociedade de Ciências Médicas, Lisbon, Portugal

Talks:

Tumour transcriptomes reveal a prognostic alternative splicing signature in colorectal cancer
23rd Annual Meeting of the Portuguese Human Genetics Society, Fundação Bissaya Barreto - Coimbra, Portugal 2019, November 15

What transcriptomes tell us about ageing and associated diseases
RiboMed Kickoff Meeting, Carcavelos, Portugal 2019, October 15

cTRAP: identification of candidate causal perturbations and phenotype-targeting compounds from differential expression data
GenomePT Symposium, CIBIO-InBIO Vairão, Portugal 2019, May 10

CELF2 at the core of a prognostic alternative splicing signature in colorectal cancer
VIII National RNA Meeting: ptRNA2019, i3S Porto, Portugal 2019, January 25

Biologist-intelligible alternative splicing analysis of RNA-seq data
BIRS/CMO workshop on Statistical and Computational Challenges in High-Throughput Genomics with Application to Precision Medicine, Oaxaca, Mexico 2018, November 6

What transcriptomes tell us about disease
RiboClub, Sherbrooke QC, Canada 2018, September 24
EMBO Young Investigator Meeting, IMP Vienna, Austria 2018, May 16

CELF2 at the core of a prognostic alternative splicing signature in colorectal cancer
2nd International Caparica Conference in Splicing, Portugal 2018, July 18

A bioinformatics application for the analysis and visualisation of alternative splicing in cancer
4th Post-EURASNET Symposium, Poznan, Poland 2016, September 28

Alternative splicing landscapes of disease
EMBO Young Scientists Forum, Lisbon, Portugal 2016, September 1
EMBO Young Investigator Meeting, EMBL Heidelberg, Germany 2016, May 13

Alternative splicing landscapes of cancer
EMBO YIP Cancer Meeting, Heraklion, Greece 2016, June 28
EMBO Young Investigator Meeting, PRBB Barcelona, Spain 2015, May 13

Species-specific differences in alternative splicing are primarily governed by evolutionary changes in cis-regulatory elements
ISMB/ECCB 2011 - Special Interest Group: Alternative Splicing, Austria Centre Vienna 2011, July 15

Determinants of tissue-specific transcriptional regulation in a transplanted chromosome
First Portuguese Forum on Computational Biology FPBC-2008, Instituto Gulbenkian de Ciência, Lisbon, Portugal 2008, July 12

A Gramática dos Genomas
1st Meeting in Biomedical Engineering IST/FML, U. Lisbon Medical School, Portugal 2002, October 30

Heart Rate Variability: Latest News
XV International Conference for Physics Students, Zadar, Croatia 2000, August 4-11

Breathing Physics
XIV International Conference for Physics Students, University of Helsinki, Finland 1999, August 14-20

Poster presentations:

CELF2 at the core of a prognostic alternative splicing signature in colorectal cancer
Gallego-Paez LM, Martins M, [Barbosa-Morais NL](#)
EACR 25, Amsterdam, The Netherlands 2018, June 30 - July 3

CELF2 at the core of a prognostic alternative splicing signature in colorectal cancer
Gallego-Paez LM, Martins M, [Barbosa-Morais NL](#)
3rd ASPIC International Congress, Lisbon, Portugal 2018, May 10

CELF2 at the core of a prognostic alternative splicing signature in colorectal cancer
Gallego-Paez L, Martins M, [Barbosa-Morais N](#)
psychomics - A bioinformatics application for the quantification, analysis and visualisation of alternative splicing from large transcriptomic datasets
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 RNA 2013 - The 18th Annual Meeting of the RNA Society, Davos, Switzerland 2013, June 11-16
 Pacific Symposium of Biocomputing (PSB) 2013, The Big Island of Hawaii, USA 2013, January 3-7
 ICSB - The 13th International Conference on Systems Biology, Toronto, Canada 2012, August 19-23

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 ISMB/ECCB 2011 - Special Interest Group: Alternative Splicing, Austria Centre Vienna 2011, July 15-16

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 Workshop on transcriptional and post-transcriptional regulatory codes, The Drake Underground, Toronto, Canada 2011, May 20
 2nd EURASNET Conference on Alternative Splicing, Granada, Spain 2011, February 28 - March 3

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Barbosa-Morais NL, Dunning MJ, Samarajiwa SA, Curtis C, Lynch AG, Tavaré S
 RECOMB 2010, FIL, Lisbon, Portugal 2010, August 12-15
 Cambridge Cancer Centre Symposium, CRUK Cambridge Research Institute, UK 2010, June 25
 Cancer-omics: Multilevel interpretation of cancer genome data, CNIO, Madrid, Spain 2009, July 6-8

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Wilson MD*, Barbosa-Morais NL*, Schmidt D, Conboy CM, Vanes L, Tybulewicz VLJ, Fisher EMC, Tavaré S, Odom DT
 First Portuguese Forum on Computational Biology FPBC-2008, Instituto Gulbenkian de Ciência, Lisbon, Portugal 2008, July 10-12

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 Statistics for Biomolecular Data Integration and Modeling - Workshop, Centro Stefano Franscini, Ascona, Switzerland 2007, June 10-15

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Barbosa-Morais NL, Aparício S
 Symposium on Alternative Transcript Diversity, European Bioinformatics Institute, Hinxton, Cambridgeshire, UK 2004, November 22-23

Abstract/poster/oral presentation evaluator:

27th Annual Meeting of the Portuguese Human Genetics Society, Lisbon, Portugal 2023, November 23-25
 iMed Conference 13.0, Lisbon, Portugal 2021
 5th EMBO Meeting, Birmingham, United Kingdom 2015, September 5-8

Session moderation:

Mentorship session, EMBO Young Scientists Forum, Lisbon, Portugal 2023, October 13
 1st Portuguese Symposium on Research and Innovations in Urology, Lisbon, Portugal 2018, December 8

Thesis jury membership

PhD, examiner:

(Main) Gabriela Santos Rodríguez, University of New South Wales 2023, December
 Catarina Inês Mendes, Faculdade de Medicina da Universidade de Lisboa 2023, April 17

Danilo da Silva Lopes, ITQB NOVA Lisboa, Portugal	2023, February 22
Marina Garcia-Vaquero, Fac.Ciências da Universidade de Lisboa, Portugal	2022, December 21
Filipe Figueiredo, Faculdade de Medicina da Universidade de Lisboa	2022, September 14
(Main) Marina Reixachs Solé, The Australian National University	2022, April
(Main) Szymon Piotr Bajew, Universitat Pompeu Fabra, Barcelona, Spain	2022, April 12
Saumya Kumar, Faculdade de Medicina da Universidade de Lisboa	2022, February 9
(Main) Laura Santana González, University of Oxford, UK	2022, January 14
(Main) Filipa Esteves Ribeiros, Universidade do Algarve, Portugal	2021, December 9
Joana Pereira, Faculdade de Ciências da Universidade de Lisboa, Portugal	2021, June 22
André Veríssimo, Instituto Superior Técnico, Lisbon, Portugal	2021, February 23
André Macedo, NOVA Medical School, Lisbon, Portugal	2021, January 28
(Main) Antonio Torres Méndez, Universitat Pompeu Fabra, Barcelona, Spain	2020, February 28
(Main) Marta Oliveira, ICBAS - Universidade do Porto, Portugal	2019, July 23
(Main) Claudia Vivori, Universitat Pompeu Fabra, Barcelona, Spain	2019, February 14
(Main) Javier Tapial, Universitat Pompeu Fabra, Barcelona, Spain	2018, December 14
(Main) Mohammad KaramiNejadRanjbar, University of Oxford, UK	2018, November 29
(Main) Babita Singh, Universitat Pompeu Fabra, Barcelona, Spain	2017, May 11
(Main) Margherita Francescato, Universidade do Porto, Portugal	2015, January 20
(Reserve) Marta Magdalena Kameniak, Autonoma University of Madrid, Spain	2014, April 29

Masters, main examiner:

Raquel Romão, IST Universidade de Lisboa, Portugal	2023, November 21
Manuel Ravasqueira, IST Universidade de Lisboa, Portugal	2023, November 21
Ana Líbano Monteiro, FC Universidade de Lisboa, Portugal	2023, April 20
Sofia Matias Coimbra Martins, FCT Universidade Nova de Lisboa, Portugal	2022, November 30
Alexandre Miguel Guedes da Silva Afonso, FM Universidade de Lisboa, Portugal	2021, June 16
Daniel José Formica Pestana, Universidade do Algarve, Portugal	2020, July 2
João Francisco Parraga Ribeiro Colaço, FC Universidade de Lisboa, Portugal	2020, June 24
Inês Diegues, IST Universidade de Lisboa, Portugal	2019, November 13
Pedro Martinho, IST Universidade de Lisboa, Portugal	2018, November 23
Mariana Ribeiro, FF Universidade de Lisboa, Portugal	2018, November 15
Hugo Ambrósio, IST Universidade de Lisboa, Portugal	2017, December 4
Inês Faleiro, FF Universidade de Lisboa, Portugal	2017, October 18
João Diogo Pinto, IST Universidade de Lisboa, Portugal	2015, May 20
Ioana Posa, FC Universidade de Lisboa, Portugal	2015, January 12
Tomás Pires de Carvalho Gomes, FC Universidade de Lisboa, Portugal	2014, December 5

Other institutional responsibilities

Coordinator of iMM node of BioData.pt (Portuguese distributed infrastructure for biological data and the Portuguese ELIXIR node)	2023
Interim Director the Information Systems Unit, iMM	2019-2020
Coordinator of iMM node of GenomePT (Portuguese distributed genome sequencing and analysis infrastructure)	2018 - 2024
Commissioner for the Information Systems Unit, iMM	2015 -
Co-organizer of The Donnelly Centre Postdoctoral Fellows' seminar series and symposium	2012

Other academic experience

Writing of press releases; interviews about science for Portuguese TV (RTP Informação), Portuguese and Lusophone newspapers (Correio da Manhã, Diário de Notícias, Expresso, Expresso das Ilhas, Público, Visão), and podcast (45 Graus)	2008 -
Member of the RNA Society	2021, November -

Member of EACR - European Association for Cancer Research	<i>2021, November -</i>
Member of ASPIC - Associação Portuguesa de Investigação em Cancro	<i>2021, November -</i>
Attendance of HFP Consulting Leadership & Management Course (Lisbon)	<i>2023, November 9-10</i>
Attendance of EMBO Laboratory Management Course (Leimen, Germany)	<i>2016, July 12-15</i>
Member of PAPS - Portuguese-American Post-graduate Society	
. Member of the Executive Committee	<i>July 2015 - June 2018</i>
. Co-leader of the Alumni Chapter	<i>July 2015 - April 2016</i>
. Leader of the Toronto Chapter	<i>Jan 2011 - May 2013</i>
Member of the Toronto Bioinformatics User Group (TorBUG) Committee	<i>2012-2013</i>
Member of PARSUK - Portuguese Association of Researchers and Students in the UK	
. Attendance of Science Communication Workshop, Oxford, UK	<i>2010, May 8-9</i>
. Co-organizer of LUSO 2007 - 1st Meeting of Portuguese Students and Researchers in the UK, Cambridge, UK	<i>2007, June 9</i>
Students' tutor, Degree in Biomedical Engineering - Instituto Superior Técnico	<i>2001-2002</i>