

DIEGO MALLO

Postdoctoral Research Associate. Cancer and Evolution lab
Biodesign Center for Personalized Diagnostics, Arizona State University
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EDUCATION

- 2010 – 2017 **Doctor of Philosophy in Methodologies and Applications in Life Sciences**
University of Vigo, Vigo, Galicia, Spain
Dissertation: Evaluation of Phylogenomic Methods for Species Tree Estimation
Advisor: David Posada, PhD
Cum Laude (max. honors)
- 2010 – 2011 **Master of Science in Methodologies and Applications in Life Sciences**
University of Vigo, Vigo, Galicia, Spain
Thesis: Phylogenomic Inference of the Eukaryotic Species Tree
Advisor: David Posada, PhD
- 2005 – 2010 **Bachelor of Science in Biology, Biotechnology track**
University of Vigo, Vigo, Galicia, Spain
Summa cum Laude

RESEARCH AND EMPLOYMENT HISTORY

- 2017 – present **Postdoctoral Research Associate.** Cancer and Evolution lab. Biodesign Center for Personalized Diagnostics, ASU, Tempe, AZ, US. *Advisor:* Carlo C. Maley, PhD
- 2015 – 2017 **Visiting Researcher.** Cancer and Evolution lab. Biodesign Center for Personalized Diagnostics, ASU, Tempe, AZ, US. *Advisor:* Carlo C. Maley, PhD
- 2010 – 2015 **Graduate Researcher.** Phylogenomics group. University of Vigo, Vigo, Galicia, Spain. *Advisor:* David Posada, PhD
 Visiting Graduate Researcher (2 months). MIT Computational Biology Group. CSAIL, MIT, Cambridge, MA, US. *Advisor:* Manolis Kellis, PhD
 Visiting Graduate Researcher (1 month). The Warnow lab. University of Austin at Texas, Austin, TX, US. *Advisor:* Tandy Warnow, PhD
 Visiting Graduate Researcher (3 months). Multicellgenome lab. Institut de Biologia Evolutiva, Barcelona, Spain. *Advisor:* Iñaki Ruiz-Trillo, PhD
- 2009 – 2010 **Undergraduate Researcher** (9 months). Bioinformatics and Molecular Evolution lab. University of Vigo, Vigo, Galicia, Spain. *Advisor:* David Posada, PhD
- 2010 **Undergraduate Researcher** (6 months). Plant Ecophysiology Lab. University of Vigo, Vigo, Galicia, Spain. *Advisor:* Nuria Pedrol, PhD
- 2009 **Undergraduate Summer Researcher** (2 months). Galician Scientific Mission (Spanish Research Council), Pontevedra, Galicia, Spain. *Advisor:* Pedro Revilla, PhD
- 2008 **Undergraduate Summer Researcher** (2 months). Galician Scientific Mission (Spanish Research Council), Pontevedra, Galicia, Spain. *Advisor:* Pedro Revilla, PhD

PEER-REVIEWED PUBLICATIONS

Scientific Papers (Total citations: 72, h-index: 4, i10-index: 3. [Google Scholar](#), [ResearchGate](#))

7. Fortunato A, Boddy AM, **Mallo D**, Aktipis A, Maley CC, Pepper WJ (2016) Natural Selection in Cancer Biology: from Molecular Snowflakes to Trait Hallmarks. Cancer Evolution, Cold Spring Harbor Laboratory Press. Cold Spring Harbor Perspectives in Medicine. DOI: [10.1101/cshperspect.a029652](https://doi.org/10.1101/cshperspect.a029652)
Impact Factor (2016): 4.0, Citations: 0
6. Chowell D, Boddy AM, **Mallo D**, Tollis M, Maley CC (2016) When (Distant) Relatives Stay Too Long: Implications for Cancer Medicine. Genome Biology 17(1):34. DOI: [10.1186/s13059-016-0906-3](https://doi.org/10.1186/s13059-016-0906-3)
Impact Factor (2016): 11.9, Citations: 1
5. **Mallo D**, Posada D (2016) Multilocus Inference of Species Trees and DNA Barcoding. Philosophical Transactions of The Royal Society B 371. DOI: [10.1098/rstb.2015.0335](https://doi.org/10.1098/rstb.2015.0335)
Impact Factor (2016): 5.8, Citations: 12
4. **Mallo D**, Martins LO, Posada D (2015) *SimPhy*: Phylogenomic Simulation of Gene, Locus and Species Trees. Systematic Biology 65:334-344. DOI: [10.1093/sysbio/syv082](https://doi.org/10.1093/sysbio/syv082)
Impact Factor (2015): 8.2, Citations: 24
3. del Campo J, **Mallo D**, Massana R, de Vargas C, Richards T, Ruiz-Trillo I (2015) Diversity and Distribution of Unicellular Opisthokonts along the European Coast Analysed Using High-Throughput Sequencing. Environmental Microbiology 17:195-207. DOI: [10.1111/1462-2920.12759](https://doi.org/10.1111/1462-2920.12759)
Impact Factor (2015): 5.9, Citations: 9
2. Martins LO, **Mallo D**, Posada D (2014) A Bayesian Supertree Model for Genome-Wide Species Tree Reconstruction. Systematic Biology 65:397-416. DOI: [10.1093/sysbio/syu082](https://doi.org/10.1093/sysbio/syu082)
Impact Factor (2014): 14.4, Citations: 19
1. **Mallo D**, Martins LO, Posada D (2014) Unsorted Homology within Locus and Species Trees. Systematic Biology 63:988-992. DOI: [10.1093/sysbio/syu050](https://doi.org/10.1093/sysbio/syu050)
Impact Factor (2014): 14.4, Citations: 3

Book chapters

3. **Mallo D**, Sanchez-Cobos A, Arenas M (2016) Diverse Considerations for Successful Phylogenetic Tree Reconstruction: Impacts from Model Misspecification, Recombination, Homoplasy and Pattern Recognition. In "Pattern Recognition in Computational Molecular Biology: Techniques and Approaches". Eds., Elloumi M, Iliopoulos CS, Wang JTL, Zomaya AY. John Wiley & Sons. Pp. 439-456
2. **Mallo D**, Martins LO, Posada D (2014) Estimation of Species Trees. In Encyclopedia of Life Sciences 2014, John Wiley & Sons, Ltd: Chichester. <http://www.els.net>
1. Martins LO, **Mallo D**, Posada D (2013) Phylogenetic Likelihood. In Encyclopedia of Life Sciences 2013, John Wiley & Sons, Ltd: Chichester. <http://www.els.net>

SELECTED CONFERENCE PRESENTATIONS

Invited oral presentations

Mallo D, Kostadinov R, Cisneros L, Kuhner M, Maley CC (2017) Agent-based Simulation of Somatic evolution: Modeling the Progression of Barrett's Esophagus to Esophageal Adenocarcinoma. Cancer Intervention and Surveillance Modeling Network (CISNET) 2017 Mid-year Meeting. Palo Alto, CA, US

Contributed oral presentations

Mallo D, Mirarab S, Bayzid MS, Warnow T, Posada D (2017) A Comprehensive Evaluation of Species Tree Methods in the Presence of Incomplete Lineage Sorting. European Society of Evolutionary Biology XVI Congress. Groningen, The Netherlands

- Mallo D**, Kuhner MK, Martinez P, Paulson TG, Li XG, Sanchez CA, Reid BJ, Graham TA, Maley CC (2017) PISCA: a New Phylogenetic Method for the Reconstruction of Somatic Evolution Using SCAs. International Society for Evolution, Medicine and Public Health 2017 Meeting. Groningen, The Netherlands
- Mallo D**, Kostadinov R, Cisneros L, Kuhner M, Maley CC (2016) Agent-based Simulation of Somatic Evolution: Modeling the Progression of Barrett's Esophagus to Esophageal Adenocarcinoma. International Society for Evolution, Medicine and Public Health 2016 Meeting. Durham, NC, US
- Mallo D**, Kostadinov R, Cisneros L, Kuhner M, Maley CC (2015) Agent-based Simulation of Somatic Evolution: Modeling the Progression of Barrett's Esophagus to Esophageal Adenocarcinoma. Third International Biannual Evolution and Cancer Conference. San Francisco, CA, US
- Mallo D**, Mirarab S, Bayzid S, Warnow T, Posada D (2014) A Comprehensive Evaluation of Species Tree Methods in the Presence of Incomplete Lineage Sorting. Evolution 2014. Raleigh, NC, US
- Mallo D**, Martins LO, Posada D (2014) Unsorted Homology within Locus and Species Trees. SBE 2014. San Juan, PR, US
- Mallo D**, Martins LO, Posada D (2014) SimPhy: Comprehensive Simulation of Gene, Locus and Species Trees at the Genome-wide Level. SBE 2014. San Juan, PR, US
- Mallo D**, Martins LO, Posada D (2013) Comprehensive Simulation of Gene Trees within Species Trees. Evolution 2013. Snowbird, Utah, US
- Mallo D**, Posada D (2011) Considering Gene Tree Uncertainty During the Reconstruction of Species Trees. III Xornada Galega de Bioinformática

Poster presentations (*presenter)

- Fortunato A*, King L, **Mallo D**, Kovacheva V, Yuan Y, Boddy A, Graham T, Aktipis A, Mardis ER, Hall A, Marks JR, Hwang S, Maley CC (2016). Genomic and Microenvironmental IntraTumor Heterogeneity in DCIS. San Antonio Breast Cancer Symposium. San Antonio, TX, US
- Couto A*, **Mallo D**, Rocha S, Pinho C (2014) Multilocus Phylogenetics: Inferring the Species Tree of the Iberian and North African Podarcis Wall Lizards. X Portuguese Evolutionary Biology Meeting, ENBE. Lisbon, Portugal
- Mallo D***, Martins LO, Posada D (2014) Unsorted Homology within Locus and Species Trees. Evolution 2014. Raleigh, NC, US
- Mallo D***, Martins LO, Posada D (2014) SimPhy: Comprehensive Simulation of Gene, Locus and Species Trees at the Genome-wide Level. Evolution 2014. Raleigh, NC, US
- Martins LO, **Mallo D***, Posada D (2014) guenomu: a Bayesian Supertree Program for Species Tree Reconstruction. SBE 2014. San Juan, PR, US
- Mallo D***, Mirarab S, Bayzid S, Warnow T, Posada D (2014) A Comprehensive Evaluation of Species Tree Methods in the Presence of Incomplete Lineage Sorting. SBE 2014. San Juan, PR, US
- Torruella G, **Mallo D**, Pérez-Porro AR, Leys SP, Ruiz-Trillo I, Giribet G, Riesgo A* (2013) Phylogenomics Reveals Polyphyly of Haploscleromorph Clades and Provides Insight into the Early Evolution of Sponges. IX Sponge World Conference, Perth, Australia
- Álvarez-Iglesias L*, Sánchez-Moreiras A, Alonso-Salgueiro I, Barral L, Irisarri J, **Mallo D**, Martínez-Troncoso O, Reigosa MJ (2010) Monitoring Early Water Stress in Forage Maize. XVII Congress of the Federation of European Societies of Plant Biology (FESPB)

HONORS, FELLOWSHIPS AND AWARDS

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| 2013 | University of Vigo Travel Fellowship (800 €) |
| 2013 | Short Lab-Visit Travel Fellowship, Spanish Ministry of Science (4500 €) |
| 2012 | Short Lab-Visit Travel Fellowship, Spanish Ministry of Science (2140€) |
| 2012 | Smithsonian MSA Workshop Travel Award (1100\$ + accommodation) |
| 2010 – 2014 | Graduate Research Fellowship, Spanish Ministry of Science (60252 € + four Grad-School tuitions) |

2010	Best Biology-major Undergrad Award (Galician Government) (3500 €)
2010	Best Biology-major Undergrad Award (University of Vigo) (1 st Grad-School tuition)
2009 – 2010	Undergraduate Research Fellowship, University of Vigo (3150 €)
2009	Summer Research Fellowship, Spanish Research Council (1500 €)
2008	Summer Research Fellowship, Spanish Research Council (1500 €)
2003 – 2011	César Rodríguez-Ramón Areces Foundation Fellowship (x9)

TEACHING & CURRICULUM DEVELOPMENT

University of Vigo, Guest Lecturer

Marine genetic resources

10h Bioinformatics computer lab

MENTORING

Undergraduate Researchers

Ji Young Li (ASU, 2017)

PROFESSIONAL SERVICE

Conferences, Symposia, and Professional Organizations

2016 – present	Cancer Modeling, Ecology and Evolutionary Theory meetings	Organizer
2012	Computational and Statistical Phylogenomics Congress	Organization volunteer

Manuscript Reviewer (13)

Bioinformatics (6); BMC Evolutionary Biology (1); Molecular Ecology Resources (1); Frontiers in Plant Science, section Evolutionary and Population Genetics (1); IEEE/ACM Transactions on Computational Biology and Bioinformatics (1); Evolutionary Bioinformatics (1); Molecular Biology and Evolution (1); Nature (1, co-reviewer)

Educational and Professional Outreach

2015: ASU's Night of the Open Door

2016: ASU's Night of the Open Door

2016: ASU's Homecoming

2017: ASU's Homecoming

PROFESSIONAL DEVELOPMENT

Workshops attended

Jan 2017: Using Amazon Web Services for HPC. ASU Research Computing. Tempe, AZ, US

June 2016: Evolutionary Biology and Ecology of Cancer Summer School 2016. Wellcome Genome Cancer, Hinxton, UK

January 2015: Introduction to Genomic Data Analysis Using HapMap and 1000 Genomes Projects. Transmitting Science, Sabadell, Spain

November 2014: NGS Sequence Analysis. Universitat politècnica de València, Valencia, Spain.

June 2014: Symposium and Software School on New Methods for Phylogenomics. Raleigh Convention Center, NC, US

March 2013: OMIC-technologies. Data analysis of NGS, RNA-seq and Chip-seq. Campus do Mar (University of Vigo), Galicia, Spain

February 2013: Symposium and Workshop on New Methods for Phylogenomics and Metagenomics. University of Texas at Austin. Austin, TX, US

July 2012: Phylogenies and DNA Genealogies: Reconstruction and Applications. IRBio. Barcelona, Spain

March 2012: Smithsonian Multiple Sequence Alignment Workshop. National Museum of Natural History. Washington, DC, US

March 2012: Frontiers in Phylogenetics Spring Symposium. National Museum of Natural History. Washington, DC, US

October 2011: Biostatistical Foundations in Bioinformatics. Instituto Gulbenkian de ciência. Oeiras, Portugal

July 2011 – August 2011: Workshop on Molecular Evolution. Marine Biological Laboratory, Woods Hole, MA, US

May 2011 – June 2011: Course on Molecular Evolution, Phylogenetics, Phylogenomics and Adaptation. Centro de Investigación Príncipe Felipe, Valencia, Spain

June 2010 – September 2010: CESGA Computational Science Summer School 2010. CESGA (Centro de Supercomputación Galego) Santiago de Compostela, Spain