

SARA BRANCO

Assistant Professor

Department of Integrative Biology

University of Colorado Denver

Email: sara.branco@ucdenver.edu

Website: <https://saramayerbranco.wixsite.com/brancolab>

orcid.org/0000-0002-9890-933X

EDUCATION

2010 - Ph.D. Evolutionary Biology. University of Chicago, USA.

2010 - M.S. Evolutionary Biology. University of Chicago, USA. (granted jointly with Ph.D. degree).

2001 - Undergraduate degree (*Licenciatura*) in Biology. University of Lisbon. Portugal.

PROFESSIONAL EXPERIENCE

2020-present. Assistant Professor. Department of Integrative Biology. University of Colorado Denver, Denver, CO, USA.

2017- 2020. Assistant Professor. Department of Microbiology and Immunology. Montana State University, Bozeman, MT, USA.

2015-2017. Postdoctoral researcher. Université Paris Sud XI, Paris, France.

2011-2015. Postdoctoral researcher. University of California, Berkeley, CA, USA.

2010-2011. Postdoctoral researcher. Biodiversity and Climate Research Center (BiK-F), Frankfurt, Germany.

2001-2004. Mycologist. Parque Natural de Montesinho. Bragança. Portugal.

PEER REVIEWED PUBLICATIONS

(* Undergraduate student, **Graduate student, *** Postdoctoral researcher in the Branco Lab)

Published articles

33. Bazzicalupo, A.***, Erlandson, S., Branine, M.*, Ruffing, L.*, Ratz, M.*, Nguyen, N., **Branco, S.** 2021. Fungal community shifts along steep environmental gradients from geothermal soils in Yellowstone National Park. *Microbial Ecology*. <https://doi.org/10.1007/s00248-021-01848-y>
32. Zhang, K., Tappero, R., Ruytinx, J., **Branco, S.**, Liao H.-L. 2021. Disentangling the role of ectomycorrhizal fungi in plant Zn acquisition using *in-situ* X-ray imaging. *Science of the Total Environment*. 801:149481. <https://www.sciencedirect.com/science/article/pii/S0048969721045551>
31. Lofgren, L., Vilgalys, R., Nguyen, N. H., Ruytinx, J., Liao, H.-L., **Branco, S.**, Kuo, A., LaButti, K., Lipzen, A., Andreopoulos, W., Pangilinan, J., Riley, R., Hundley, H., Na, H., Barry, K.,

- Grigoriev, I. V., Stajich, J. E., Kennedy, P. G. **2021**. Comparative Genomics Reveals Dynamic Signatures of Host Specificity in Mutualist Fungi. *New Phytologist*. 230:774-792. <https://nph.onlinelibrary.wiley.com/doi/10.1111/nph.17160>
30. Bazzicalupo, A.***, Thomas, M.**, Munro-Ehrlich, M.**, **Branco, S. 2020**. Gene copy number variation does not reflect structure or environmental selection in two recently diverged populations of a mycorrhizal fungus. *G3*. 10:4591-459. (Cover image) <https://www.g3journal.org/content/10/12/4591>
29. Bazzicalupo, A.***, Ruytinx, J., Ke, Y.-H., Coninx, L., Colpaert, J., Nguyen, N., Vilgalys, R., **Branco, S. 2020**. Fungal heavy metal adaptation through single nucleotide polymorphism and copy number variation. *Molecular Ecology*. 29: 4157-4169. <https://doi.org/10.1111/mec.15618>
28. **Branco, S. 2019**. Fungal diversity from communities to genes. *Fungal Biology Reviews* 33:225-237. (Invited review). <https://doi.org/10.1016/j.fbr.2019.06.003>
27. Branine, M.*, Bazzicalupo, A.***, **Branco, S. 2019**. Biological and applications of endophytic insect pathogenic fungi. *PLoS Pathogens* 15(7):e1007831. (Invited review). <https://doi.org/10.1371/journal.ppat.1007831>
26. Carpentier, F., Rodriguez de la Vega, R., **Branco, S.**, Snirc, A., Coelho, M.A., Hood, M.H., Giraud, T. **2019**. Convergent recombination suppression between mating-type genes and centromeres in selfing anther-smut fungi. *Genome Research* 29:944-953. doi: 10.1101/gr.242578.118
25. Lofgren, L.A., Uehling, J.K., **Branco, S.**, Bruns, T.D., Martin, F., Kennedy, P.G. **2019**. Genome-based estimates of fungal rDNA copy number variation across phylogenetic scales and ecological lifestyles. *Molecular Ecology* 28(4):721-730. doi: 10.1111/mec.14995
24. Riquelme, M., Aime, C., **Branco, S.**, Brand, A., Brown, A., Glass, L., Kahman, R., Momany, M., Requena, N., Rokas, A., Stajich, J., Trail, F. **2018**. The Power of Discussion: Support for Women at the Fungal Gordon Research Conference. *Fungal Genetics and Biology* 121:65-67. doi: 10.1016/j.fgb.2018.09.007
23. **Branco, S.**, Carpentier, F. Rodriguez de la Vega, R., Badouin, H. Snirc, A., Le Prieur, S., Coelho, M. A., de Vienne, D. M., Begerow, D., Hood, M. E., Giraud, T. **2018**. Multiple convergent supergene evolution events in mating-type chromosomes. *Nature Communications* 9: 2000. doi: 10.1038/s41467-018-04380-9.
22. Taylor, J.W., **Branco, S.**, Gao, C., Hann-Soden, C., Montoya, L., Sylvain, I., Gladieux, P. **2017**. Sources of fungal genetic variation and associating it with phenotypic diversity. *Microbiology Spectrum* 5(4): FUNK-0057-2016. doi:10.1128/microbiolspec.FUNK-0057-2016.
21. **Branco, S.**, Badouin, H., Rodriguez de la Vega, R. C., Gouzy, J., Carpentier, F., Aguilletta, G., Siguenza, S., Brandenburg, J.-T., Coelho, M.A., Hood, M.E., Giraud, T. **2017**. Evolutionary strata on young mating-type chromosomes despite lack of sexual antagonism. *Proceedings of the National Academy of Sciences* 114:7067-7062. doi: 10.1073/pnas.1701658114.

(Press release: <http://www.cnrs.fr/inee/communication/breves/b292.html>;

Recommended by F1000:

<https://f1000.com/prime/727734778?key=ricXEGuMDnX5Mus>)

20. Rosendahl, Lisa M., **Branco, S.**, Chung, J.A., Glassman, S.I., Liao, H.-L., Peay, K.G., Smith, D.S., Talbot, J.M., Taylor, J.W., Vellinga, E.C., Vilgalys, R., Bruns, T.D. **2017**. Survey of corticioid fungi in North American pinaceous forests reveals hyperdiversity, underpopulated sequence databases, and species that are potentially mycorrhizal. *Mycologia* 109:115-127. doi.org/10.1080/00275514.2017.1281677.
19. **Branco, S.**, Bi, K., Liao, H.-L., Gladieux, P., Badouin, H., Ellison, C.E., Nguyen, N., Vilgalys, R., Peay, K.G., Taylor, J.W., Bruns, T.B. **2017**. Continental-level population differentiation and environmental adaptation in *Suillus brevipes*. *Molecular Ecology* 26:2063-2076. doi: 10.1111/mec.13892
(Invited contribution for special issue in Microbial Local Adaptation).
18. Waring, B., Adams, R.I., **Branco, S.**, Powers, J. **2016**. Nitrogen cycling and soil communities along gradients of forest composition and age in regenerating tropical dry forests. *New Phytologist* 209: 845-854. doi: 10.1111/nph.13654
17. Nguyen, N.H., Song, Z., Bates, S.T., **Branco, S.**, Tedersoo, L., Menke, J., Schilling, J., Kennedy, P. **2016**. FunGuild: an open annotation database for parsing high-throughput fungal molecular data by ecological guild. *Fungal Ecology* 20: 241-248. doi.org/10.1016/j.funeco.2015.06.006
16. Taylor, J.W., Hann-Soden, C., **Branco, S.**, Sylvain, I., Ellison, C. **2015**. Clonal reproduction in fungi. *Proceedings of the National Academy of Sciences* 112: 8901-8908. doi: 10.1073/pnas.1503159112
15. **Branco, S.**, Gladieux, P., Ellison, C., C., Kuo, A., LaButii, K., Lipzen, A., Grigoriev, I.V., Liao, H.-L., Vilgalys, R., Peay, K. G., Taylor, J. W., Bruns, T. D. **2015**. Genetic isolation between two recently diverged populations of a symbiotic fungus. *Molecular Ecology* 24: 2747-2758. doi: 10.1111/mec.13132
(Publication highlighted in Skrede&Brandsstrom-Durling. 2015. Mol Ecol, 24:2598-2600).
14. Liao, H.-L., Chen Y., Bruns, T.D., Peay, K.G., Taylor, J.W., **Branco, S.**, Talbot, J.M., Vilgalys, R. **2014**. Metatranscriptomic analysis of ectomycorrhizal roots reveal genes associated with *Piloderma-Pinus* symbiosis: new methodologies for assessing gene expression *in situ*. *Environmental Microbiology* 16:3730-3742. doi: 10.1111/1462-2920.12619
13. Nilsson, R.H., et al. (+55 authors including **Branco, S.**). **2014**. Improving ITS sequence data for identification of plant pathogenic fungi. *Fungal Diversity* 67: 11-19. doi: 10.1007/s13225-014-0291-8
(Publication highlighted in <https://explore.researchgate.net/display/news/2015/01/13/Uniting+fungi+data+worldwide>).
12. Talbot, J.M., Bruns, T.D., Taylor, J.W., Smith, D.P., **Branco, S.**, Glassman, S.I., Erlandson, S., Vilgalys, R., Liao, H.-L., Smith, M., Peay, K.G. **2014**. Endemism and functional convergence across the North American soil mycobiome. *Proceedings of the National Academy of Sciences* 111:6341-6346. doi.org/10.1073/pnas.1402584111
11. Gladieux, P., Ropars, J., Badouin, H., Branca, A., Aguilera, G., Vienne, D., Vega, R., **Branco, S.**, Giraud, T. **2014**. Fungal evolutionary genomics provide insights into the mechanisms of adaptive divergence in eukaryotes. *Molecular Ecology* 23:753-773. (Invited Review). doi: 10.1111/mec.12631

10. **Branco, S.**, Bruns, T.D., Singleton, I. **2013**. Fungi at a small scale: spatial zonation of fungal assemblages around single trees. *PLoS One* 8(10):e78295. doi.org/10.1371/journal.pone.0078295
9. Bengtsson-Palme, J. (+19 authors including **S. Branco**). **2013**. Improved software detection and extraction of ITS1 and ITS2 from ribosomal ITS sequences of fungi and other eukaryotes for analysis of environmental sequencing data. *Methods in Ecology and Evolution*, 4:914-919. doi.org/10.1111/2041-210X.12073
8. Talbot, J. M., Bruns, T. D., Smith, D. P., **Branco, S.**, Glassman, S. I., Erlandson, S., Vilgalys, R., Peay, K. **2012**. Independent roles of ectomycorrhizal and saprotrophic communities in soil organic matter decomposition. *Soil Biology and Biochemistry*, 57:282-291. doi.org/10.1016/j.soilbio.2012.10.004
7. Nilsson, R. H., Veldre V., Wang, Z., Eckart, M., **Branco, S.**, et. al. **2011**. A note on the incidence of reverse complementary fungal ITS sequences in the public sequence databases and a software program for their detection and reorientation. *Mycoscience*, 52 (4):272-282. doi.org/10.1007/S10267-010-0086-Z
6. **Branco, S.** **2010**. Serpentine soils promote ectomycorrhizal fungal diversity. *Molecular Ecology*, 19:5566-5576. doi: 10.1111/j.1365-294X.2010.04913.x.
5. **Branco, S.** & Ree, R. **2010**. Serpentine soils do not limit ectomycorrhizal fungal diversity. *PLoS ONE* 5(7): e11757.
4. Avis, P., **Branco, S.** Tang, Y., Mueller, G. **2009**. Pooled samples bias community descriptions. *Molecular Ecology Resources*, 10:135-141.
3. **Branco, S.** **2009**. Are oaks locally adapted to serpentine soils? *Northeastern Naturalist* 16 (special issue 5):329-340.
2. Bidartondo, M. (100+ authors including **S. Branco**). **2008**. Preserving accuracy in GenBank. *Science* 319:1616.
1. **Branco, S.** **2002**. Inventariação preliminar de comunidades macrofúngicas em matas da serra de Sintra. *Revista de Biologia*, 20:179-190.

PEER REVIEWED BOOK CHAPTERS

- Taylor, J.W., **Branco, S.**, Gao, C., Hann-Soden, C., Montoya, L., Sylvain, I., Gladieux, P. **2018**. Sources of fungal genetic variation and associating it with phenotypic diversity. Heitman, J., Howlett, BJ, Crous, PW, Stukenbrock, EH, James, TY, Gow, NAR (eds). *The Fungal Kingdom*. American Society for Microbiology. doi: 10.1128/9781555819583.
- Schechter, S., **Branco, S.** **2014**. The ecology and evolution of mycorrhizal fungi in extreme soils. In Rajakaruna, N., Boyd, R., Harris, T. (eds). *Plant Ecology and Evolution in Harsh Environments*. pp: 32-52.
- Branco, S.** **2011**. Fungal diversity – an overview. In Grillo & Venora (eds) *The Dynamic Processes in Biodiversity – Case Studies in Evolution and Spatial Distribution*. ISBN 978-953-307-772-7.
- (Open access book chapter with over 4000 downloads).

GRANTS

Grants awarded – External (Active grants in Italics)

2021-25 – *National Science Foundation. Plant Biotic Interactions. Mutualism and environmental stress: heavy metal tolerance in a mycorrhizal system.* PI: **Sara Branco**. Co-PI: Sunny Liao. **\$787,884**.

2020-21 - Department of Energy, Joint Genome Institute, Community Science Program. New Investigator. CPSNI 506158. Mechanisms of heavy metal tolerance in *Suillus luteus*. PI: **Sara Branco**. Co-PI: Sunny Liao, Joske Ruytinx, Jan Colpaert. **\$4,100** (Instrumentation Grant).

2019-21 – Department of Energy. Joint Genome Institute. Environmental Molecular Sciences Laboratory. FICUS. Proposal #50960 Discover ectomycorrhizal fungi-triggered macro- and micronutrient reactions and movements: from cell to ecosystem function. PI: Hui-Ling Liao. Co-PIs: Jennifer Talbot, Colin Averil, **Sara Branco**, Rytas Vilgalys, Edward Brzostek. **\$153,549**. (Instrumentation Grant).

2017 – Department of Energy. National Synchrotron Light Source II. Proposal #301726. Evolution of Zn tolerance in symbiotic mycorrhizal fungi. PI: Hui-Ling Liao; co-PIs: **Sara Branco**, Joske Ruytinx, Ryan Tappero. **\$100,000**. (Instrumentation Grant).

2017 – Daniel E. Stuntz Memorial Foundation. *Alpine Cortinarius section Anomali from the Western United States*. PI: Cathy Cripps; co-PI: **Sara Branco**. **\$2000**.

2016 – Department of Energy, Joint Genome Institute, Community Science Program. A genome atlas of the ectomycorrhizal genus *Suillus*: Phylogenetic diversity and population genomics of a keystone guild of symbiotic forest fungi. PI: Nhu H. Nguyen; co-PIs: Peter Kennedy, **Sara Branco**, Rytas Vilgalys, Hui-Ling Liao, Jan V. Colpaert. **\$536,592**. (Instrumentation Grant).

2016 - Department of Energy, Joint Genome Institute / Environmental Molecular Sciences Laboratory, Community Science Program. Proposal #49437 Combined 'omics approaches for the study of ectomycorrhizal symbiosis between *Suillus* and Pinaceae, with emphasis on their role in nutrient cycling PI: Hui-Ling Liao; co-PIs: Rytas Vilgalys, **Sara Branco**, Nhu H. Nguyen, Thomas D. Bruns, John W. Taylor. **\$198,805**. (Instrumentation Grant).

2008 - Doctoral Dissertation Improvement Grant. *Local Adaptation of Symbiotic Fungi to Serpentine Soils*. National Science Foundation. **\$12,000**.

Grants awarded – Internal (Active grants in Italics)

2021 – University of Colorado Denver. ORS Large Grant. The effects of soil heavy metal contamination on plant mutualistic fungi. PI: **Sara Branco**. **\$20,000**.

2020 – University of Colorado Denver. Young Upwardly Mobile Professor Program. PI: **Sara Branco**. **\$500**.

2018 – Center for Faculty Excellence Grant. Montana State University. **\$4,085**.

2018 – Montana Agricultural Experiment Station/College of Agriculture Internal Equipment Funding. PIs: Jennifer Lachowiec, **Sara Branco**, Hikmet Budak. **\$15,000**.

OTHER INDICATORS OF SCHOLARLY ACTIVITY

2018 – Commentator for *The Scientist* (<https://www.the-scientist.com/?articles.view/articleNo/52416/title/Fungus-Repurposed-a-Bacterial-Gene-to-Sense-Gravity-with-Crystals/>)

2017 – Publication recommended by Faculty 1000:
<https://f1000.com/prime/727734778?key=ricXEGuMDnX5Mus>

NON PEER REVIEWED PUBLICATIONS (outreach, diversity and technical reports)

Gluck-Thaler, E., Vogan, A., **Branco, S.** **2022**. Evolution by leaps and bounds: a giant mobile element disperses multivariate metal tolerance traits in fungi. **Current Biology**.

Branco, S., More, G., Shay, R., Quandt, A., Lovett, B., Arnold, E. A. **2021**. Increasing MSA diversity via interchange, ambassadorship, and recruitment: an opportunity to diversify and promote inclusion throughout our MSA community. **Inoculum**.
(<https://files.constantcontact.com/8b73de79701/758be6af-f081-4172-a2ea-4480cacc5179.pdf>)

Cheeke, T.E., **Branco, S.**, Haelewaters, D., Natvig, D.O., Maltz, M., Rodriguez, S.C., Cafaro, M.J., May, G. **2018**. Diversity in the Mycological Society of America. **Inoculum**.
(<http://msafungi2.org/wp-content/uploads/2019/03/Diversity-in-the-Mycological-Society-of-America.pdf>)

Branco, S., Vellinga, E.C. **2015**. Gender balance in Mycology. **Inoculum**. 66(5):1-3.
(<http://msafungi2.org/wp-content/uploads/2019/03/September-2015-Inoculum.pdf>)

Branco, S. **2014**. Fungi and heavy metal pollution. **Mycena News**. 65:07
(<http://www.mssf.org/mycena-news/pdf/1403mn.pdf>)

Branco, S. **2013**. Next generation sequencing. Or how we will (maybe) finally understand fungal diversity. **Mycena News** 64:06 (<http://www.mssf.org/mycena-news/pdf/1302mn.pdf>)

Branco, S. **2011**. Fungi of the state rock. **Mycena News** 63:03
(<http://www.mssf.org/mycena-news/pdf/1111mn.pdf>)

Branco, S. **2004**. Inventariação e Caracterização do Património micológico do Parque Natural de Montesinho – estudo preliminar de comunidades macrofúngicas. **Parque Natural de Montesinho**. Bragança, Portugal.

PEER REVIEWED PRESENTATIONS AT CONFERENCES

(*Undergraduate student, **Graduate student, ***Postdoctoral researcher in the Branco Lab)

2022 – **Branco, S.** *Suillus* as an emerging model for ecology and evolution of plant-fungal mutualisms. International Mycorrhiza Society. Beijing, China. (Invited key note speaker).

2022 – **Branco, S.**, Bazzicalupo, A., Zhang, K., Ruytinx, J., Liao, H.-L. *Metal tolerance in the mycorrhizal fungus Suillus luteus*. 31th Fungal Genetics Conference. Pacific Grove, CA. (invited oral presentation).

2021 - Zhang K., Tappero R., Rutinx J., **Branco S.**, Liao H.-L. 2021. How ectomycorrhizal fungi regulate plant nutrient acquisition along a Zn gradient: New evidence using X-ray

imaging approach. Soil Science Society of America International Annual Meeting, Salt Lake City, Utah (poster presentation).

- 2021** – Liao, H-L, Wang, H., Tappero, R., Zhang, K., Wu, S., Khalid, H., **Branco, S.**, Ruytinx, J., Bhatnagar, J., Rojas, A., Miao, E., Maciejewski, A., Kuo, A., Barry, K., Grigoriev, I., Vilgalys, R. *Ectomycorrhizal fungi regulate rhizosphere metal ion processes and plant metal uptake under high heavy metals*. Joint Genome Institute User Meeting. Remote conference.
- 2021** - Bazzicalupo, A.***, Erlandson, S., Branine, M.*, Ruffing, L.*, Ratz, M.*, Nguyen, N., **Branco, S.** *Local steep abiotic gradients drive soil fungal community turnover in Yellowstone National Park*. Botany 2021. Remote conference.
- 2021** – Ke, Y.-H., Bazzicalupo, A.***, **Branco, S.**, Nguyen, N., Ruytinx, J., Vilgalys, R. *Global introduction patterns of the pine ectomycorrhizal fungus Suillus luteus*. Botany 2021. Remote conference.
- 2020** - **Branco, S.**, Bazzicalupo***, A., Ke, Y.-H., Ruytinx, J., Coninx, L., Colpaert, J., Nguyen, N., Vilgalys, R. *Population genomics of Suillus luteus across the globe*. 45th New Phytologist Symposium: Ecological and evolutionary consequences of plant-fungal invasions. Campinas, Brazil (invited oral presentation). Cancelled due to the COVID-19 pandemic
- 2020** - Bazzicalupo, A.***, Ke, Y.-H., Ruytinx, J., Coninx, L., Colpaert, J., Nguyen, N., Vilgalys, R., **Branco, S.** *Incipient local adaptation to heavy metal pollution in a mycorrhizal fungus*. TAGC Online, Genetics Society of America. (poster presentation).
- 2020** – Ruffing, L.*, Bazzicalupo, A.***, Gannon, K.***, Erlandson, S., Ratz, M.*, **Branco, S.** *The effects of soil pH on fungal growth*. 34th National Undergraduate Research Conference. Bozeman, MT. (poster presentation). Cancelled due to the COVID-19 pandemic
- 2020** – Ratz, M.*, Erlandson, S., Ruffing*, L., Bazzicalupo, A.***, Gannon, K.***, **Branco, S.** *Testing for thermal tolerance in fungi from Yellowstone National Park*. 34th National Undergraduate Research Conference. Bozeman, MT. (poster presentation). Cancelled due to the COVID-19 pandemic
- 2020** – Branine, M.*, **Branco, S.** *Investigating ecological trade-offs in endophytic insect pathogenic fungi*. 34th National Undergraduate Research Conference. Bozeman, MT. (poster presentation). Cancelled due to the COVID-19 pandemic
- 2020** – Bazzicalupo***, A., Ke, Y.-H., Ruytinx, J., Coninx, L., Colpaert, J., Nguyen, N., Vilgalys, R., **Branco, S.** *Incipient local adaptation to heavy metal pollution in a mycorrhizal fungus*. European Congress on Fungal Genetics. Rome, Italy. (oral presentation).
- 2019** – **Branco, S.**, Carpentier, F., Rodriguez de la Vega, R., Badouin, H., Coelho, M., Begerow, D., Hood, M., Giraud, T. *Supergene convergent evolution in fungal mating-type chromosomes*. Mycological Society of America Meeting. Minneapolis, MN. (oral presentation).
- 2019** – Ke, Y.-H., Bazzicalupo, A.***, **Branco, S.**, Vilgalys, R. *Population genomic study of an introduced ectomycorrhizal fungus Suillus luteus*. Mid-States Mycological Conference. University of Tennessee, Knoxville, TN. (oral presentation).

- 2019** - Bazzicalupo, A.***, Ke, Y.-H., Ruytinx, J., Coninx, L., Colpaert, J., Nguyen, N., Vilgalys, R., **Branco, S.** *Evolution of heavy metal tolerance in a mycorrhizal fungus*. Mycological Society of America Meeting. Minneapolis, MN. (oral presentation).
- 2019** – Branine, M.*, Hager, M, Erlanson, S., **Branco, S.** *Investigating ecological trade-offs in endophytic insect pathogenic fungi*. Mycological Society of America Meeting. Minneapolis, MN. (poster presentation).
- 2019** – **Branco, S.**, Carpentier, F., Rodriguez de la Vega, R., Badouin, H., Coelho, M., Begerow, D., Hood, M., Giraud, T. *Supergene convergent evolution in fungal mating-type chromosomes*. Evolution Meetings. Providence, RI. (oral presentation).
- 2019** - Bazzicalupo, A.***, Ke, Y.-H., Ruytinx, J., Coninx, L., Colpaert, J., Nguyen, N., Vilgalys, R., **Branco, S.** *Evolution of heavy metal tolerance in a mycorrhizal fungus*. Ecological and Evolutionary Genomics Gordon Research Conference. Manchester, NH. (poster presentation).
- 2019** - Bazzicalupo, A.***, Ke, Y.-H., Ruytinx, J., Coninx, L., Colpaert, J., Nguyen, N., Vilgalys, R., **Branco, S.** *Evolution of heavy metal tolerance in a mycorrhizal fungus*. 14th Annual DOE Joint Genome Institute Genomics of Energy & Environment Meeting. San Francisco, CA. (oral presentation).
- 2019** – Nguyen, N., Bazzicalupo, A.***, Lofgren, L., Ruytinx, J., Liao, H-L., Chen, K-H., Certano, A., Rojas, A., Ke, Y-H., Looney, B., Cotter, H., Colpaert, J., Kuo, A., Barry, K., Grigoriev, I., Bruns, T., Vilgalys, R., Kennedy, P., **Branco, S.** *A genome atlas of the mycorrhizal genus Suillus: a model for plant-fungus mutualism belowground*. 14th Annual DOE Joint Genome Institute Genomics of Energy & Environment Meeting. San Francisco, CA. (poster presentation).
- 2019** – Nguyen, N., Bazzicalupo, A.***, Lofgren, L., Ruytinx, J., Liao, H-L., Chen, K-H., Certano, A., Rojas, A., Ke, Y-H., Looney, B., Cotter, H., Colpaert, J., Kuo, A., Barry, K., Grigoriev, I., Bruns, T., Vilgalys, R., Kennedy, P., **Branco, S.** *A genome atlas of the mycorrhizal genus Suillus: a model for plant-fungus mutualism belowground*. 61st Annual Maize Genetics Conference. St. Louis, MO. (poster presentation).
- 2019** – Liao, H.-L., **Branco, S.**, Bruns, T., Vasant, S., Barry, K., Grigoriev, I., Vilgalys, R. *Changes in pattern of mycorrhization and gene expression as consequence of ectomycorrhizal basidiomycete Suillus brevipes and local vs non-local pine host interactions*. 30th Fungal Genetics Conference. Pacific Grove, CA. (oral presentation).
- 2018** – Giraud, T., **Branco, S.**, Badouin, H., Rodriguez de la Vega, R.C., Gouzy, J., Carpentier, F., Coelho, M.A., Hood, M.E. *Evolutionary strata on young mating-type chromosomes despite lack of sexual antagonism*. Evolution meetings Montpellier, France.
- 2018** – Carpentier, F., **Branco, S.**, Rodriguez de la Vega, R.C., Badouin, H., Coelho, M.A., de Vienne, D.M., Bergerow, D., Hood, M.E., Giraud, T. *The evolution of recombination suppression in mating-type chromosomes: convergence, evolutionary strata and degeneration*. Sex uncovered: the evolutionary biology of reproductive systems. Jacques Monod Conference. Roscoff, France.
- 2018** - **Branco, S.**, Bi, K., Liao, L.-H., Gladieux, P., Badouin, H., Ellison, C., Nguyen, N., Vilgalys, R., Peay, K.G., Taylor, J., Bruns, T.D. *Environmental adaptation in Suillus brevipes (Boletales)*. 11th International Mycological Congress. San Juan. Puerto Rico. (Invited oral presentation).

- 2018** – Branco S., Vellinga, E. *Diversity in Mycology*. 11th International Mycological Congress. San Juan. Puerto Rico. (Invited oral presentation).
- 2018** – Liao, H-L., **Branco S.**, Nguyen, N.H., Kennedy, P., Bruns, T., Hsu, C.-M., Chen, K.-H., Kuo, A., Barry, K., Grigoriev I., Hoyt, D.W., Tappero, R., Vilgalys, R. *Mutualistic coevolution mediating species and population level biodiversity of ectomycorrhizal fungi*. 11th International Mycological Congress. San Juan. Puerto Rico. (invited oral presentation)
- 2018** – Cheeke, T., **Branco S.**, Haelewaters, D., Natvig, D., Maltz, M., Rodriguez, S.C., Cafaro, M., May, G. *Diversity in the Mycological Society of America*. 11th International Mycological Congress. San Juan. Puerto Rico. (oral presentation)
- 2018** – Ke, Y., **Branco S.**, Rojas, A., Hameed, K., Grigoriev, I., Kuo, A., Barry, K., Nguyen, N.H., Kennedy, P., Bruns, T., Vilgalys, R. *Mating gene evolution and population genetics in Suillus brevipes*. 11th International Mycological Congress. San Juan. Puerto Rico. (poster presentation)
- 2018** – **Branco, S.** *Is sex chromosome structure related to sex? Insights from fungi*. Cellular and Molecular Fungal Biology Gordon Research Conference. Holderness, NH. (invited oral presentation).
- 2018** – Carver A., Stillman K., Liu H., **Branco S.**, Kuo A., Bruns T., Grigoriev I. *Comparative Genomic Analyses of Four Pyrophilous Fungi*. Genomics of Energy & Environment Meeting. Joint Genome Institute. San Francisco, CA. (poster presentation).
- 2018** – Nguyen, N.H., Liao, H-L., Chen, K.-H., Ruytinx, J., **Branco S.**, Certano, A., Lofgren, L., Rojas, J.A., Ke, Y.H., Cotter, H.V.T., Colpaert, J., Kuo, A., Barry, K., Grigoriev, I., Bruns, T., Vilgalys, R., Kennedy, P. *A genome atlas of the ectomycorrhizal genus Suillus: phylogenetic diversity and population genomics of a keystone guild of symbiotic forest fungi*. Genomics of Energy & Environment (poster presentation)
- 2017** – **Branco, S.** *Population differentiation and environmental adaptation in Suillus brevipes*. International Symposium Fungi and Plants, Animals and Human beings. Museum of Science and Nature. Tokyo, Japan. (invited oral presentation).
- 2017** – Uehling, J., Logfgren, L., **Branco, S.**, Ke, Y., Bonito, G., Vilgalys, R. *Data dumpster diving in the fungal -omics era*. Mycological Society of America. Athens, Georgia.
- 2017** – Liao, S. Talbot, J.M, Bruns, T.D., Taylor, J.W., Peay, K.G., **Branco, S.**, Kuo, A., Barry, K., Grigoriev, I., Hoyt, D.W., Nicora, C.D., Purvine, S.O., Velickovic, D., Anderton, C.R., Chu, R., Pasa-Tolic L., Vilgalys, R. *Unraveling the core mechanisms of Suillus-Pinus symbiosis using integrated omics*. Mycological Society of America. Athens, Georgia.
- 2017** - **Branco, S.**, Bi, K., Liao, L.-H., Gladieux, P., Badouin, H., Ellison, C., Nguyen, N., Vilgalys, R., Peay, K.G., Taylor, J., Bruns, T.D. *Continental-level population differentiation and environmental adaptation in the mushroom Suillus brevipes*. 29th Fungal Genetics Meeting. Asilomar, CA, USA. (invited oral presentation).
- 2017** - **Branco, S.**, Badouin, H., Gouzy, J., Rodriguez de la Vega, R.C., Singueza, S., Coelho, M.A., Hood, M.E., Giraud, T. *Multiple evolutionary strata on mating-type chromosomes despite lack of sexual antagonism*. 29th Fungal Genetics Meeting. Asilomar, CA, USA. (poster presentation).
- 2017** - Ke, Y.-H., Rojas, J.A., Liao H.-L., Nguyen, N., Kennedy, P., **Branco, S.**, Bruns, T.D., Vilgalys R. *Mating system and mating gene evolution in Suillus luteus*. 29th Fungal Genetics Meeting. Asilomar, CA, USA. (poster presentation).
- 2017** – Carver, A., Bruns, T.D., Gregoriev, I., Stillman, K., **Branco, S.**, Kuo, A. *Comparative*

genomic analyses of two pyrophilous fungi. 29th Fungal Genetics Meeting. Asilomar, CA, USA. (poster presentation).

- 2016** - **Branco, S.**, Badouin, H., Gouzy, J., Rodriguez de la Vega, R.C., Singueza, S., Coelho, M.A., Hood, M.E., Giraud, T. *Multiple evolutionary strata on mating-type chromosomes despite lack of sexual antagonism*. Evolutionary genomics and systems biology: bringing together theoretical and experimental approaches. Jacques Monod Conferences. Roscoff, France. (poster presentation).
- 2016** - Liao, L.-H., Talbot, J.M., Bruns, T.D., Taylor, J.W., Peay, K.G., **Branco, S.**, Hoydt, D.W., Nicora, C.D., Purvine, S.O, Kuo, A., Barry, K., Grigoriev, I., Vilgalys, R. *Unraveling the core mechanisms of Suillus-Pinus symbiosis through integrated metatomics*. EMSL Integration 2016: Multiscale Ecosystem Analysis and Design. Richland, Washington, USA. (poster presentation).
- 2016** - **Branco, S.**, Taylor, J.W., Bruns, T.D. *Continental-level population differentiation and environmental adaptation in Suillus brevipes*. Mycological Society of America. Berkeley, California, USA. (oral presentation).
- 2016** - Peay, K.G., Talbot, J.M., **Branco, S.**, Glassman, S., Taylor, J.W., Vilgalys, R., Bruns, T.D. *Dispersal influences fungal biodiversity at multiple spatial and genetic scales*. Mycological Society of America. Berkeley, California, USA. (oral presentation).
- 2016** - Cheeke, T.E., **Branco, S.**, Haelewaters, D., Natvig, D., Maltz, M., Rodriguez, S.C., May, G. *Diversity in the Mycological Society of America*. Mycological Society of America. Berkeley, California, USA. (poster presentation).
- 2016** - **Branco, S.**, Taylor, J. Bruns, T. *Continental-level population differentiation and environmental adaptation in Suillus brevipes*. 13th European Conference on Fungal Genetics. Paris, France (oral presentation).
- 2015** - **Branco, S.**, Taylor, J. Bruns, T. *Genetic isolation between two recently diverged populations of a symbiotic fungus*. 28th Fungal Genetics Conference. Asilomar, CA, USA (poster presentation).
- 2014** - **Branco, S.**, Taylor, J. W., Bruns, T. D. *Recent divergence in fungal populations*. Evolution. Raleigh, NC, USA (Oral presentation).
- 2014** - **Branco, S.**, Taylor, J. W., Bruns, T. D. *Recent divergence in fungal populations*. Mycological Society of America. East Lansing, MI, USA. (Oral presentation).
- 2014** - **Branco, S.** Fungal life history traits: growth and dispersal. Mycological Society of America. East Lansing, MI, USA. (Invited oral presentation).
- 2014** - **Branco, S.**, Taylor, J. W., Bruns, T. D. *Recent divergence in fungal populations*. Population genomics: fungi as models. Universite Paris Sud, Orsay, France. (Oral presentation).
- 2014** - **Branco, S.**, Taylor, J. W., Bruns, T. D. *Recent divergence in fungal populations*. Joint Genome Institute User Meeting. Walnut Creek, CA, USA. (Poster presentation).
- 2013** - **Branco, S.** *Recent divergence in fungal populations*. IX Encontro Nacional de Biologia Evolutiva. Oeiras, Portugal (Oral presentation).
- 2013** - **Branco, S.** *Detecting nuclear imbalance in dykariotic fungi*. IX Encontro Nacional de Biologia Evolutiva. Oeiras, Portugal (Oral presentation).

- 2013** - Liao, H. L., Bruns, T., Peay, K. G., Taylor, J., **Branco, S.**, Talbot, J., Smith, D., Vilgalys, R. *Host-specific relationships between Suillus and Pinus species*. Mycological Society of America. Austin, TX, USA (poster presentation).
- 2013** - **Branco, S.**, Bruns, T., Singleton, I. *Fungi at a small scale: spatial zonation of fungal assemblages around single trees*. Eukaryotic -Omics - SMBE satellite meeting. Davis, CA, USA (Oral presentation).
- 2013** - **Branco, S.**, Taylor, J. Bruns, T. Population genomics of *Suillus brevipes*. 27th Fungal Genetics Conference. Asilomar, CA, USA (Poster presentation).
- 2012** - **Branco, S.**, Singleton, I., Bruns, T. *Fungi at a small scale: spatial zonation of fungal assemblages around single trees*. 4th Argonne National Laboratory Soil Metagenomics Meeting. Bloomingdale, IL, USA (Oral presentation).
- 2011** - **Branco, S.** *Serpentine soils promote mycorrhizal fungal diversity*. Mycological Society of America. Fairbanks, AK, USA (Oral presentation).
- 2011** - **Branco, S.** *Serpentine soils and the ecology and evolution of fungal-plant symbiotic partners*. 7th International Serpentine Ecology Conference. Coimbra, Portugal. (Oral presentation).
- 2010** - **Branco, S.** *Serpentine soils promote mycorrhizal fungal diversity*. Encontro Nacional de Biologia Evolutiva. Lisbon, Portugal (Poster presentation).
- 2011** - **Branco, S.** *Serpentine soils promote mycorrhizal fungal diversity*. International Mycological Congress. Edinburg, UK (Poster presentation).
- 2010** - **Branco, S.** *Serpentine soils do not limit ectomycorrhizal fungal diversity*. Evolution, Portland, OR, USA (Oral presentation).
- 2010** - **Branco, S.** *Serpentine soils and the ecology and evolution of mycorrhizal symbioses*. Challenges in Environmental Molecular Microbiology. Argonne National Laboratory, IL, USA (Oral presentation).
- 2009** - **Branco, S.** *Serpentine soils do not limit ectomycorrhizal fungal diversity*. European Society for Evolutionary Biology 12th meeting. Turin, Italy (poster presentation).
- 2009** - **Branco, S.** *Serpentine soils do not limit ectomycorrhizal fungal diversity*. Mycology and Botany. Snowbird, UT, USA (Oral presentation).
- 2009** - **Branco, S.** *Serpentine soils do not limit ectomycorrhizal fungal diversity*. Evolution. Moscow, ID, USA (Oral presentation).
- 2008** - **Branco, S.** *Serpentine soils do not limit ectomycorrhizal fungal diversity*. IV Encontro Biologia Evolutiva. Instituto de Biologia Molecular e Celular. Porto, Portugal (Oral presentation).
- 2008** - **Branco, S.** *Ecophylogenetics of ectomycorrhizal fungi and extreme environments*. 21st New Phytologist Symposium. The Ecology of Ectomycorrhizal Fungi. Montpellier, France (Poster presentation).
- 2008** - **Branco, S.** *Phylogenetic community structure of mycorrhizal fungi and extreme environments*. Evolution. Minneapolis, MN, USA (Oral presentation).
- 2008** - **Branco, S.** *Are oaks locally adapted to serpentine soils?* 6th International Conference on Serpentine Ecology. Bar Harbor, ME, USA (Oral presentation).
- 2008** - **Branco, S.** *Is there a serpentine ectomycorrhizal community?* 6th International Conference on Serpentine Ecology. Bar Harbor, ME, USA (Oral presentation).

- 2007 - Branco, S.** *Serpentine soils as a selective pressure for ectomycorrhizal fungi.* XVI Congress of European Mycologists. St Petersburg, Russia (Oral presentation).
- 2007 - Branco, S.** *Is there a serpentine ectomycorrhizal community?* Mycological Society of America Meeting. Baton Rouge, LA (Oral presentation).
- 2006 - Branco, S.** *Adaptação local de fungos ectomicorrízicos a ambientes extremos.* II Encontro Nacional de Biologia Evolutiva. Vairao. Portugal (Oral presentation).
- 2006 - Branco, S.** *Ectomycorrhizal Fungal Communities from Serpentine and Non-Serpentine Mediterranean Oak Forests.* V International Conference on Serpentine Ecology. Siena, Italy (Poster presentation).
- 2006 - Branco, S.** *Ectomycorrhizal Fungal Communities from Serpentine and Non-serpentine Mediterranean Oak Forests.* 5th International Conference on Mycorrhiza. Granada, Spain (Poster presentation).
- 2006 - Branco, S.** *Mediterranean serpentine and non-serpentine ectomycorrhizal fungal communities.* 8th International Mycological Congress. Cairns, Australia (Poster presentation).
- 2005 - Branco, S.** *Macrofungal Communities of Northeast Portugal.* Mycological Society of America Meeting. Hilo, Hawaii, USA (Poster presentation).
- 2003 - Branco, S.** *A Preliminary Study of the Macrofungal Communities of Northeast Portugal.* XIV Congress of European Mycologists. Yalta, Crimea, Ukraine (Poster presentation).
- 2003 - Baptista, P., Branco, S. & Martins, A.** *Evaluation of the biodiversity and relative abundance of mycological flora in chesnut trees, *Castanea sativa* Mill., in Northeast Portugal: Preliminary Results.* 4th International Conference on Mycorrhiza. Montreal, Canada (Poster presentation).
- 2003 - Baptista, P., Branco, S. & Martins, A.** *Preliminary evaluation of edible mushroom diversity and production in the Northeast Portugal.* 3rd International Workshop on Edible Mycorrhizal Mushrooms: Ecology, Physiology and Cultivation. Victoria, Canada (Poster presentation).
- 2002 - Branco, S., Rodrigues, A. P.** *Preliminary Study of NE Portugal's Macrofungal Communities.* Seventh International Mycological Congress. Oslo, Norway (Poster presentation).
- 2002 - Baptista, S., Branco, S., Neves, S., Rodrigues, A. P.** *Measuring Macrofungal Diversity in Four Portuguese Protected Areas.* Seventh International Mycological Congress. Oslo, Norway (Poster presentation).
- 2001 - Branco, S., Barata, M.** *Preliminary Inventory of Serra de Sintra's Macrofungal Communities.* Sixth National Ecology Meeting. Lisbon, Portugal (Poster presentation).
- 1999 - Gante, H., Brites, D., Branco, S. & Correia, O.** *Structure and Distribution of Male and Female Individuals of *Corema album* (Empetraceae).* Fourth National Ecology Meeting. Aveiro, Portugal (Poster presentation).

INVITED SEMINARS

- 2022 –** *The genetic basis of fungal adaptation.* University of Denver. Denver, CO.

- 2022** – *The genetic basis of fungal adaptation*. University of Uppsala. Uppsala, Sweden. (Remote presentation).
- 2021** – *The genetic basis of fungal adaptation*. University of Cincinnati. Cincinnati, OH. (Remote presentation).
- 2021** – *The genetic basis of fungal adaptation*. University of Arizona. Tucson, AZ. (Remote presentation).
- 2021** – *The evolution of heavy metal tolerance in Suillus*. North American Mycological Association. Granby, CO.
- 2021** – *The genetic basis of fungal adaptation*. Boulder Colorado Native Plant Society. Boulder, CO. (Remote presentation).
- 2021** - *The genetic basis of fungal adaptation*. Colorado State University. Fort Collins, CO. (Remote presentation).
- 2020** - *The genetic basis of fungal adaptation*. University of Manitoba. Manitoba, Canada (Remote presentation).
- 2020** - *The genetic basis of fungal adaptation*. Population Biology Seminar. Duke University. Durham, N.C. (Remote presentation).
- 2020** - *The genetic basis of fungal adaptation*. Organisms and Evolution Seminar. Duke University. Durham, N.C. (Remote presentation).
- 2020** - *The genetic basis of fungal adaptation*. University of Central Florida. Orlando, FL. (Remote presentation).
- 2020** - *The genetic basis of fungal adaptation*. University of Colorado, Denver. Denver, CO.
- 2019** – *The genetic basis of fungal adaptation*. University of Waterloo. Waterloo, Canada.
- 2019** – *The genetic basis of fungal adaptation*. University of Hawai'i. Honolulu, HI.
- 2018** – *The genetic basis of fungal adaptation*. Oregon State University. Corvallis, OR.
- 2017** - *Fungal diversity, from communities to genes*. National Museum of Natural History 'Naturalis'. Leiden, Netherlands.
- 2017** – *Heavy metals and the ecology and evolution of fungi*. Environmental Protection Agency/Department of Environmental Quality. Helena, MT.
- 2017** - *Fungal diversity, from communities to genes*. Montana State University. Bozeman, MT.
- 2017** - *Is sex chromosome structure related to sexes? Insights from fungi*. Universite Paris-Sud, Orsay, France.
- 2016** - *Fungal diversity, from communities to genes*. University of Tennessee. Knoxville, TN.
- 2016** - *Fungal diversity, from communities to genomes*. University of San Francisco. San Francisco, CA.
- 2016** - *Fungal diversity, from communities to genomes*. Montana State University. Bozeman, MT.
- 2015** - *Fungal diversity, from communities to genomes*. Universite Paris-Sud, Orsay, France.
- 2015** - *Opportunities and challenges in molecular biodiversity research in the 21st century*. Norwegian University of Science and Technology. Trondheim, Norway.
- 2015** - *Fungal diversity, from communities to genomes*. Arizona State University, Tempe, AZ.

- 2015** - *Genetic isolation between two recently diverged populations of a symbiotic fungus*. University of California, Berkeley, CA.
- 2014** - *Adaptation in symbiotic fungi*. LabEx TULIP. Universite de Toulouse III Paul Sabatier. Toulouse, France.
- 2014** - *Adaptation in symbiotic fungi: from communities to populations*. Colorado State University, Fort Collins, CO.
- 2013** - *Recent divergence in fungal populations*. University of California, Berkeley, CA.
- 2013** - *Fungal diversity - from populations to communities*. Duke University, Durham, NC.
- 2011** - *Serpentine soils and the ecology and evolution of fungal-plant symbiotic partners*. Un. Lisboa, Portugal.
- 2011** - *Serpentine soils and the ecology and evolution of fungal-plant symbiotic partners*. Un. Coimbra, Portugal.
- 2011** - *Serpentine soils and the ecology and evolution of fungal-plant symbiotic partners*. Universität Basel, Switzerland.
- 2010** - *Serpentine soils and the ecology and evolution of fungal-plant symbiotic partners*. Field Museum of Natural History. Chicago, IL.
- 2009** - *Serpentine soils and the ecology and evolution of mycorrhizal symbioses*. Morton Arboretum, Lisle, IL.
- 2008** - *Fungi in extreme environments*. Illinois Mycological Association. Chicago, IL.
- 2006** - *Evolution of symbiotic fungi in extreme environments*. University of Siena. Italy.
- 2002** - *Fungi*. University of Coimbra. Portugal.

PROFESSIONAL ORGANIZATIONS

Membership

International Mycological Association

Mycological Society of America

The Society for the Study of Evolution

Genetics Society of America

Marie Curie Alumni Association

PUBLICATIONS IN PREPARATION

(* Undergraduate student, **Graduate student, *** Postdoctoral researcher in the Branco Lab)

Branco, S., Bazzicalupo A.*** In prep. Evolutionary sheltering: environmental shifts and asymmetric adaptation in mutualistic partners.

Schauster, A.**, Bazzicalupo, A.***, **Branco, S.** In prep. Fungal diversity from an acidic thermal area in Yellowstone National Park.

TEACHING

Courses taught

Introduction to Evolution BIOL3445. Department of Integrative Biology. University of Colorado Denver. (Undergraduate)

Seminar BIOL6655. Department of Integrative Biology. University of Colorado Denver.
(Graduate)

Seminar/Workshop BIOM494. Department of Microbiology and Immunology. Montana State University. (Undergraduate)

General Microbiology BIOM360. Department of Microbiology and Immunology. Montana State University. (Undergraduate)

Forest Products. Agriculture School. Polytechnic Institute of Bragança. Portugal.
(Undergraduate)

Guest Lectures

2020 - Guest Lecturer. Mycology. Department of Integrative Biology. University of Colorado Denver.

2019 - Guest Lecturer. *Plants in the Environment ENSC210.* Department of Microbiology and Immunology. Montana State University.

2017-19 - Guest Lecturer. *Careers in Microbiology BIOM101.* Department of Microbiology and Immunology. Montana State University.

2016 - Guest Lecturer. *Ecology in English (MS2S1).* Master Program in Ecology, Biodiversity and Evolution. Universite de Paris Sud. France

2014 - Guest lecturer. *Comparative Genomics.* Department of Plant and Microbial Biology, University of California, Berkeley.

2013 - Guest speaker. *Revolutions.* Department of Spanish and Portuguese, University of California, Berkeley.

2002 - Guest Lecturer. *Non-Vascular Plants.* University of Coimbra. Portugal.

Workshop Instruction

2015 - Instructor. QB3 *Winter Bioinformatics Bootcamp* (python). University of California, Berkeley.

2014 - Instructor. QB3 *Introduction to Programming for Bioinformatics Bootcamp* (python). University of California, Berkeley.

2002 - Lecturer and lab manager. *Introduction to Macrofungal Studies.* Agriculture School. Polytechnic Institute of Bragança. Portugal.

Teaching Assistantships

2013 - Teaching assistant. QB3 *Introduction to Programming for Bioinformatics Bootcamp* (python). University of California, Berkeley.

2013 - Visiting Scientist. *Mushrooms of California.* University of California, Berkeley.

2011 - Visiting Scientist. *Mushrooms of California.* University of California, Berkeley.

2009 - Teaching Assistant. *Biological Diversity.* University of Chicago.

2009 - Teaching Assistant. *Environmental Ecology.* University of Chicago.

2000 - Lab assistant. *Mycology.* University of Lisbon. Portugal.

Tutoring

2013 - Tutor. Berkeley High School. Berkeley, California.

MENTORING

Department of Integrative Biology, University of Colorado Denver

2022-present – Dr. Jessica Fletcher. (Postdoctoral Researcher; Main Advisor)

2021-present – Cody Lewis. (Undergraduate student; Mentor)

Treya Dabney. (Undergraduate student; Mentor)

Audrey Spencer. (PhD Student; Committee member)

Alexander Smith. (MS student; Main Advisor)

Erika Garcia. (PhD student; Chair of Examination Committee)

Hazel Carr. (PhD student; Committee member)

2020-present – Tina Mellie. (PhD student at CU Boulder; Committee member)

Derrick Singleton. (MS student; Committee member)

2020-21 – Annie Schauster. (PhD student; Main Advisor)

Gary Olds. (MS student; Committee Chair)

Lahari Gadey. (MS student; Committee member)

Department of Microbiology and Immunology, Montana State University

2020 – Seamus Hoolanen. (Undergraduate student; Mentor)

Julia Wolch. (Undergraduate student; Mentor)

Colin Kennedy. (Undergraduate student; Mentor)

Shae Milne. (Undergraduate student; Mentor)

2019-20 – Kathryn Gannon. (MS student, Main Advisor)

Megan Ratz. (Undergraduate student; Mentor)

2019 – Mallory Thomas. (Rotation PhD student; Rotation)

Mason Munro-Ehrlich. (Rotation PhD student; Rotation)

2018-20: Dr. Anna Bazzicalupo. (Postdoctoral Researcher; Main Advisor)

Hannah Goemann. (PhD student; Committee member)

Chance Noffsinger. (MS student; Committee member)

Lauren Ruffing. (Undergraduate student; Mentor)

2018-19 - Maddison Trent. (Undergraduate student; Mentor)

Hannah Sweitzer. (PhD candidate; Committee member)

2017-2020: Margaret Branine. (Undergraduate student; Mentor)

2017-18 - Rio Wofford. (Undergraduate student; Mentor)

2017 - Sophie Watkins. (Undergraduate student; Mentor)

Laboratory of Ecology, Systematics and Evolution. Universite de Paris Sud

2016 – 2017 - Fantin Carpenter. (PhD student; Mentor)

Helene Badouin. (PhD student; Mentor)

Thivya Thiruvalluvar. (MS student; Mentor)

Department of Plant and Microbial Biology, University of California Berkeley

2015 - Dabao Lu. (M.S. student; Mentor)

2014 - Akiko Carver. (Ph.D. student; Mentor)

2013 - Gabriel Rosenthal. (Rotation Ph.D. student; Mentor)

Monika Fischer. (Rotation Ph.D. student; Mentor)

2012 - William Moore. (Rotation Ph.D. student; Mentor)

Committee on Evolutionary Biology, University of Chicago

2008 - Lorenzo Pecoraro. (Ph.D. student; Mentor)

BRANCO LAB MEMBERS' ACHIEVEMENTS AND AWARDS

Postdoctoral Researchers

2020 – Anna Bazzicalupo; Federation of European Microbiological Societies Travel Award (\$500)

Graduate Students

2021 – Alex Smith; North American Mycological Association Voucher Collection Assistant

2021 – Annie Schauster; North American Mycological Association Voucher Collection Assistant

2020 – Annie Schauster; Graduate Fellowship, University of Colorado Denver (\$30,000)

Undergraduate Students

2022 – Cody Lewis; University of Colorado Denver EURECA! Grant (\$500)

2022 – Cody Lewis; Ronald E. McNair Post-baccalaureate Achievement Program (\$5000)

2022 - Treya Dabney; University of Colorado Denver Work Study (\$3000)

2022 – Cody Lewis; University of Colorado Denver EURECA! Student Assistant Experience (\$890)

2020 – Seamus Hoolanen; Montana State University Undergraduate Scholars Program Award (\$900)

2019 - Megan Ratz; Montana State University Undergraduate Scholars Program Award (\$900)

Lauren Ruffing; Montana State University Undergraduate Scholars Program Award (\$900)

2018 – Margaret Branine; Mycological Society of America Mentor Travel Award (\$500)

2018 – Margaret Branine; Montana State University Undergraduate Scholars Program Award (\$900)

SERVICE

Departmental Service

2020-2021 – Member. Graduate Advisory Committee. Department of Integrative Biology, University of Colorado Denver.

2019 – Environmental Microbiology faculty search committee. Department of Microbiology and Immunology. Montana State University.

2018-2020 – Member. Undergraduate Curriculum Committee. Department of Microbiology and Immunology. Montana State University

Scientific Society Offices

2021-2026 – Member. MSA Distinctions Award Committee. Mycological Society of America.

2021 – *Ad hoc* Member. Ambassadors Interchange Fund Committee. Mycological Society of America.

2020-2023 – Elected Councilor for Genetics and Cell Biology. Mycological Society of America.

2017-2019 – Elected Councilor for Ecology and Pathology. Mycological Society of America.

2019 – Chair. Mentor Student Travel Award Committee. Mycological Society of America.

2017-2018 - Member. Diversity and Inclusion Committee. Mycological Society of America.

2015-2018 – Member. Mentor Student Travel Award Committee. Mycological Society of America.

2015-2017 – Chair. Member. Diversity and Inclusion Committee. Mycological Society of America.

2011-2014. Secretary. Associação Portuguesa de Biologia Evolutiva, Portugal.

Reviewing Activity

Funding Agency Peer Review Activity

2021 - *Ad hoc* Proposal Reviewer. Plant Biotic Interactions. National Science Foundation.

2020 - *Ad hoc* Proposal Reviewer. Fulbright Committee Poland.

2020 - Review Panelist. Plant Biotic Interactions. National Science Foundation.

2019 - Review Panelist. Marie Skłodowska-Curie Actions Individual Fellowships. Horizon 2020. The European Union Framework Programme for Research and Innovation.

2019 - *Ad hoc* Proposal Reviewer. Biological Systems Science Division. Department of Energy.

2019 - *Ad hoc* Proposal Reviewer. Dimensions of Biodiversity. National Science Foundation.

2019 - Review Panelist. Community Science Project. New Investigator. Joint Genome Institute.

2019 - *Ad hoc* Proposal Reviewer. Deutsche Forschungsgemeinschaft (Germany).

2018 – Reviewer. Student abstracts SACNAS – Advancing Chicanos/Hispanic & Native Americans in Science: The National Diversity in STEM Conference.

2018 – Review Panelist. Dimensions of Biodiversity. National Science Foundation.

2017 – Reviewer. Graduate Student Research Awards for the Society of Systematic Biology.

2017 – *Ad hoc* Proposal Reviewer. Collaborative Research. National Science Foundation.

2016 – *Ad hoc* Proposal Reviewer. Faculty Early Career Development (CAREER) Program. National Science Foundation.

2015 – *Ad hoc* Proposal Reviewer. Long Term Research in Environmental Biology. National Science Foundation.

Journal Peer Review Activity

2021-present – Associate Editor. Molecular Ecology.

2021-present – Associate Editor. Molecular Ecology Resources.

***Ad hoc* reviewer for the following journals:**

American Naturalist

Annals of Microbiology

Biodiversity and Conservation

BMC Evolutionary Biology

Canadian Journal of Microbiology

Current Biology

Ecological Monographs

Evolution

Forest Pathology

Fungal Ecology

Fungal Biology

Fungal Genetics and Biology

G3: Genes | Genomes | Genetics

Genes

Genome Research

ISMEJ

Journal of Evolutionary Biology

mBio

Molecular Ecology

Mycologia

Mycological Research

Mycorrhiza

New Phytologist

PLoS Biology

PLoS Genetics

PLoS One

Plant Ecology and Diversity

PNAS

Scientific Reports

Source Code for Biology and Medicine

Student Presentation Evaluation

2016 – Student presentation judge. Mycological Society of America. Berkeley, CA, USA.

2012 – Referee. Poster presentation abstracts. North American Congress for Conservation Biology.

2011 – Student presentation judge. Mycological Society of America. Fairbanks, AK, USA.

Other Service Activities

2022 – Opponent. *Fungal molecular ecology in boreal forests and challenges associated with unidentified environmental DNA sequences*. Kerri Kluting Ph.D. defense. Department of Ecology and Genetics, Evolutionary Biology, Uppsala University, Sweden.

2021 – Moderator. *Pathogen-Host coevolution – Combating resistance breaking in agriculture* eSymposium. International Society for Molecular Plant-Microbe Interactions.

2018 – Co-chair of the *Evolutionary Genomics* symposium. 11th International Mycological Congress. San Juan. Puerto Rico.

2018 – Judge for student poster presentations. 11th International Mycological Congress. San Juan. Puerto Rico.

- 2018** – Discussion leader at Power Hour (discussion on women in STEM). Cellular and Molecular Fungal Biology Gordon Research Conference. Holderness, NH.
- 2017** – Assessor for BIOM455R (Research in Microbiology). Montana State University.
- 2017** – Evaluator for the final projects in *Microbial Physiology*. Department of Microbiology and Immunology. Montana State University.
- 2017** – Examiner. *Elucidating the mating system of Phaffia rhodozyma, an astaxanthin-producing yeast with biotechnological potential*. Marcia Cristina David Palma, Ph.D. degree in Biology. Faculdade de Ciencias e Tecnologia, Universidade Nova de Lisboa, Portugal.
- 2013** – External Examiner. *Molecular Investigations to Characterize Ectomycorrhizal Fungal Communities Associated with some Deciduous Trees of Galyat, Pakistan*. Sobia Ilyas, Ph.D. Degree in Botany. University of the Punjab, Pakistan.
- 2013** – Volunteer for the UC Berkeley post-doctoral union (UAW5810).

Selected Science Outreach

- 2021** – Speaker. Tree Talk – *Populus tremuloides*. Black Cube Nomadic Art Museum. Kanosha Pass, CO. <https://blackcube.art/event/tree-talks-populus-tremuloides-by-ben-kinsley>
- 2021** – Speaker for CalTeach. University of California’s Science and Math Initiative. Remote.
- 2020** - Skype a scientist. Veramendi Elementary. New Braunfels, TX. COVID-19 homeschooling.
- 2019** – Presenter. ‘Fungus is Among Us!’ activity. Heck Quaw Elementary school. Belgrade, MT.
- 2019** – Presenter. ‘Fungus is Among Us!’ activity. Museum of the Rockies. Bozeman, MT.
- 2019** – Host. At-risk Belgrade High School student visit to Montana State University.
- 2019** – Featured mycologist in ‘A Fungus is Among Us’, a children’s book by Joy Keller.
- 2018** – Mentor. Bozeman 500 Women Scientists Mentoring Event. Bozeman, MT.
- 2018** – Collaboration with Chief Dull Knife College (Northern Cheyenne Reservation, Montana).
- 2018** – Presenter. At-risk Belgrade High School student visit to Montana State University.
- 2017** - Presenter. Freshman Symposium. Montana State University, Bozeman, MT.
- 2017** - Skype a scientist. Canyon View Junior High, Orem, UT.
- 2016** - Professional Development Workshop. Panelist. Mycological Society of America. Berkeley, California.
- 2015** - Expanding Your Horizons. *Mushrooms have DNA too!* Workshop Leader. University of California. Berkeley, California.
- 2014** - *Understanding fungal diversity from a population perspective*. Fungus Federation of Santa Cruz. Santa Cruz, California.
- 2014** - Dinner with a Scientist. Oakland Unified School District. Oakland, California.
- 2014** - *Understanding fungal diversity from a population perspective*. Bay Area Mycological Society. Berkeley, California.

- 2014** - Expanding Your Horizons. *Exploring Genetics and Genomics*. Workshop Leader. University of California. Berkeley, California.
- 2013** - Science, Neat! – *Fungi!* El Rio Bar, San Francisco, California.
- 2013** - Science careers. Asian Heritage Group. Mt Diablo High School. Concord, California.
- 2013** - Microbiology hands-on. English Language Advisory Council. Mt Diablo High School. Concord, California.
- 2012 - 2014** - Member of outreach chapter for the Associação Portuguesa de Biologia Evolutiva.
- 2012** - Pleasant Hill Elementary Science Night. Pleasant Hill, California.
- 2011** - Volunteer at the 42th Annual Fungus Fair – Mycological Society of San Francisco. Berkeley, California.
- 2010** - Science Career Showcase. Foreman High School. Chicago.
- 2010** - Featured scientist. DNA Discovery Center. Field Museum of Natural History. Chicago.
- 2010** - Members Night. Field Museum of Natural History. Chicago.
- 2009** - Science Day. Roosevelt University. Chicago.
- 2009** - Field Ambassador Expedition IV (Botany). Teacher Professional Development Program. Field Museum Natural History. Chicago.
- 2009** - Talk to the scientist hour. DNA Discovery Center. Field Museum Natural History. Chicago.
- 2008** - Scientists at the schools. Blaine Elementary School / Field Museum Natural History. Chicago.
- 2008** - Cimby Science Summit. Field Museum Natural History. Chicago.
- 2007** - Rachel Carlson Science Summit. Field Museum Natural History. Chicago.
- 2007-2010** - Field Museum of Natural History behind the scenes tours (for high school and college students). Chicago.

AWARDS AND HONORS

General Awards

- 2020** - Mycological Society of America C. J. Alexopoulos Prize (Early Career Mycologist). **\$1000.**
- 2015** - Best poster award. 28th Fungal Genetics Conference. Asilomar, CA, USA. **\$100.**
- 2014** - Forest Fungal Ecology Postdoctoral Award. Mycological Society of America. **\$2500.**
- 2009** - Doolittle Harrison Award. University of Chicago. **\$500.**
- 2008** - Best Presentation Prize. 21st New Phytologist Symposium. The Ecology of Ectomycorrhizal Fungi. Montpellier, France.
- 2006** - Research Award. Committee on Evolutionary Biology/Pritzker Laboratory for Molecular Systematics and Evolution. **\$1500.**
- 2003** - Best Young Mycologist Poster Presentation. XIV Congress of European Mycologists. Yalta, Crimea, Ukraine.

Scholarships and fellowships

- 2017** – Temminck Fellowship. National Museum of Natural History ‘Naturalis’. Leiden, Netherlands. **€1256**.
- 2016-2017** - Marie Skłodowska-Curie Individual Postdoctoral Fellowship. European Commission. **€173,076**.
- 2015** - Onsager Fellowship. Norwegian University of Science and Technology, Trondheim, Norway. **€250,000**. (Declined).
- 2014** - Postdoctoral Fellowship. LabEx TULIP; Universite de Toulouse III Paul Sabatier, France. **€46,000**. (Declined).
- 2013** - Berkeley Research Impact Initiative. University of California, Berkeley. **\$1215**.
- 2009-2010** - Field Museum Women in Science Graduate Fellowship. **\$25,000**.
- 2008** - Field Dreams. Field Museum of Natural History Women’s Board. **\$1500**.
- 2008** - Graduate Fellowship. Mycological Society of America. **\$2000**.
- 2007** - Small Grant. British Mycological Society. **£300**.
- 2006** - Hinds Fund. University of Chicago. Committee on Evolutionary Biology. **\$1800**.
- 2005** - Hinds Fund. University of Chicago. Committee on Evolutionary Biology. **\$1500**.
- 2005-2008** - Graduate Fellowship. Calouste Gulbenkian Foundation (Portugal). **\$66,240**.
- 2004-2005** - Luso/American Foundation/Fulbright in the US for Portuguese citizens. Fulbright Commission. Portugal. **\$2500**.
- 2004** - Visiting scholarship. Field Museum of Natural History. **\$500**.

Travel Awards

- 2018** – International Mycological Congress Travel Award. International Mycological Congress. **\$500**.
- 2014** - Ecological Genomics Symposium Travel Award. American Genetics Association. **\$500**. (Declined).
- 2014** - Wikipedia Travel Grant. Fungal Environmental Sampling and Informatics Network. **\$900**.
- 2013** - Women Evolving the Biological Sciences. **\$300**.
- 2013** - Diversity Travel Award. Society for Molecular Biology and Evolution. **\$1050**.
- 2011** - Fundação Luso-Americana para o Desenvolvimento. Portugal. **€1100**.
- 2011** - BiK Net Outgoing Award. Biodiversity and Climate Research Center. Germany. **€2187**.
- 2010** - Committee on Evolutionary Biology, University of Chicago. **\$915**.
- 2010** - Fungal Environmental Sampling and Informatics Network. **\$2000**.
- 2010** - 9th International Mycological Congress. **\$500**.
- 2009** - Biological Sciences Division. University of Chicago. **\$500**.
- 2009** - Fungal Environmental Sampling and Informatics Network. **\$1000**.
- 2008** - 21st New Phytologist Symposium. The Ecology of Ectomycorrhizal Fungi. Montpellier, France. **\$500**.

- 2008** - Committee on Evolutionary Biology, University of Chicago. **\$500.**
- 2008** - Sixth International Conference on Serpentine Ecology. **\$150.**
- 2007** - Committee on Evolutionary Biology, University of Chicago. **\$1500.**
- 2007** - Mycological Society of America. **\$500.**

Award Nominations

- 2019** – Mycological Society of America C. J. Alexopoulos Prize (early career mycologist).
- 2019** - Montana State University Provost's Award for Undergraduate Teaching and Mentoring.
- 2019** – Montana State University Honors College 'Spirit of Discovery' Award.
- 2018** - Nature Inspiring Science Award.

Honors

- 2021** – Sara Branco wins NSF grant - <https://news.ucdenver.edu/sara-branco-earns-nsf-grant-to-study-metal-tolerance-in-symbiotic-plant-fungal-system/>
- 2020** – Sara Branco MSA Alexopoulous Prize highlight - <https://news.ucdenver.edu/new-faculty-member-sara-branco-phd-earns-prestigious-mycology-award/> , <https://msafungi.org/2020-award-winners-and-plaques/>
- 2019** – Branco Lab undergraduate research highlight: <https://www.montana.edu/news/19161/>
- 2018** - Society for the Study of Evolution New Faculty Profile: <http://www.evolutionarysociety.org/content/new-faculty-profiles/new-faculty-profile-sara-branco.html>
- 2017** – Article recommended by Faculty of 1000: <https://f1000.com/prime/727734778?key=ricXEGuMDnX5Mus>
- 2017** – Field Museum Women in Science Alumni Spotlight. Fall 2017 Field Museum Women in Science E-Newsletter. <http://mailchi.mp/fieldmuseum/frgsn6weef-328869?e=4620321e62>
- 2010** - Scientist of the month. Association for Women in Science. http://www.awis-chicago.org/community/may2010_scientist.

PROFESSIONAL DEVELOPMENT

- 2021** – Inclusive Pedagogy Academy. University of Colorado Denver.
- 2020** - Equity Certificate Program. University of Colorado Denver.
- 2019** – Indian Education for all. Montana State University.
- 2019** – National Science Foundation Town Hall: Reintegrating Biology. Webinar.
- 2019** – Diversity Certificate Program Level 1 – Cultural Identity. Montana State University.
- 2018** – Grant Writing Bootcamp. Center for Faculty Excellence. Montana State University.
- 2014** - Fungal Genomics. Joint Genome Institute. Walnut Creek, CA, USA.

- 2013** - Women Evolving Biological Sciences National Symposium. Selected participant. NESCent, Durham, NC, USA.
- 2012** - Galaxy 101: Data Integration, Analysis, and Sharing. Center for Genomic Resources Laboratory. University of California, Berkeley. USA.
- 2012** - Next Generation Sequence Data Analysis Training Workshop (Qiime, MG-Rast). 4th Argonne National Laboratory Soil Metagenomics Meeting. Bloomingdale, IL, USA.
- 2012** - Berkeley Biophysics Python Module. University of California, Berkeley. USA.
- 2011** - Genomic Tools (Unix; Genotype and SNP Calling; Genome Assembly). Center for Genomic Resources Laboratory. University of California, Berkeley. USA.
- 2011** - Metamycology and beyond: using fungi in educational contexts. FESIN Research Network. Fairbanks, AK, USA.
- 2011** -Workshop on Comparative Genomics. Cesky Krumlov, Czech Republic.
- 2010** - Metagenomic Data Analysis. Joint FESIN/Nordforsk Research Network Workshop. Edinburgh, Scotland.
- 2009** - Ecological Approaches to Analyzing Complex Community Datasets. FESIN. Snowbird, UT, USA.
- 2009** - Evolutionary Tree Visualization. Biodiversity Synthesis Center. Field Museum of Natural History. Chicago, IL, USA.