

Pietro Longo Hollanda de Mello

Curriculum vitae

16th of March, 2026

Bachelor of Science in Biology
Bachelor of Education in Biology
Master in Ecology
Ph.D. in Ecology and Evolutionary
Biology

Research Associate
Collège de France
Manceau Laboratory, CNRS
Collège de France, CIRB
11, place Marcelin Berthelot
75005 Paris, France

PERSONAL INFORMATION

Date of birth.	December 11 th , 1989.
Nationality.	Brazilian/Italian
E-mail.	pietro.de-mello@college-de-france.fr

EDUCATION

2015-2022.	Ph.D. Degree. Ecology and Evolutionary Biology, University of Kansas, KU, United States of America. (Advisor: Richard E. Glor; Honors)
2012-2014.	M.Sc. Degree. Ecology Graduate Program, University of Brasília, UnB, Brazil (Advisor: Cristiano Nogueira).
2007-2012.	B. Ed. Degree. Biological Sciences, University of Brasilia, UnB, Brazil.
2007-2010.	B.Sc. Degree. Biological Sciences, University of Brasilia, UnB, Brazil.

RESEARCH FOCUS

My research explores the origins and maintenance of biological diversity, focusing on genetic and developmental mechanisms. I investigate how intra- and interspecific variation arises at the gene and transcript level, and how cells utilize this diversity during development to generate diverse forms. Employing an integrative approach spanning evolutionary, developmental, and molecular biology, I focus on color patterns and sexual dimorphism. Color patterns, with their quantifiable nature and simple genetic architecture, provide insights into polymorphism and fitness consequences. Sexually dimorphic traits, particularly secondary sexual characteristics, offer opportunities to study hormonal regulation and developmental pathways. I leverage non-model organisms and domesticated animals to identify novel candidate genes and cell types, subsequently validating their function in model systems. My work aims to bridge the gap between evolutionary genetics and developmental biology, revealing the molecular underpinnings of phenotypic diversity.

PROFESSIONAL APPOINTMENTS

Research Associate

2026 – Current. Research Associate, Manceau Lab – Collège de France, Paris, France.
2024 – 2026. Research Associate, Parichy Lab – University of Virginia, Virginia, USA.

Post-doctoral Research Fellow

2022 – 2024. Rising Scholar Postdoctoral Fellow – University of Virginia, Virginia, USA.

Lecturer

2014 – 2015. Universidade Paulista (Paulista University) – UNIP, Brasília, Brazil.

PUBLICATIONS

Published Refereed Journal Articles

2026. Delai Huang, **Pietro L. H. de Mello**, Tiffany Liu, Yu Liu, Emaan Kapadia, Yipeng Liang, Jianguo Lu, Joseph Corbo, David Parichy. Graded BMP signals modulate yellow and red color in fishes impacting adult pigment pattern and behavior.
2026. D. Huang, T., Liu, A.A. Carr, **Pietro Longo H. de Mello**, Y. Liang, L.P., Shriver, F., Chauvigné, S.L., Johnson, J., Cerdà, G.J. Patti, & D.M. Parichy. Cell type diversification and phenotype convergence underlying white fin-ornamentation of cyprinid fishes, *Proc. Natl. Acad. Sci. U.S.A.* 123 (13) e2537571123,
2025. **Cleo H. Falvey***, **Pietro Longo H. de Mello***, Jody M. Taft, Alyssa A. Vanerelli, Paul M. Hime, Alana M. Alexandre, Richard E. Glor, Anthony J. Geneva. Chromosomal Fusions and Evolutionary Forces: Exploring the Neo-Sex Chromosome System of *Anolis distichus*. *Journal of Heredity* (Accepted). * Co-first authorship.
2025. Katia Korzewnisky, **Pietro L. H. de Mello**, Yipeng Liang, McKenna Feltes, Steven Farber, David Parichy. Dominant negative Mitf allele impacts melanophore and xanthophore development and reveals collaborative interactions with Tfec in zebrafish chromatophore lineages. *Pigment Cell & Melanoma Research*.
2024. Tanner Meyers, **Pietro L. H. de Mello**, Richard E. Glor. Environmental Variation Influences Genome Evolution in Hispaniolan Trunk Anoles (*Anolis distichus*). *Molecular Ecology*.
2024. Ashmika Behere, **Pietro L. H. de Mello**, Richard E. Glor. The Genetic Architecture of Dewlap Pattern in Hispaniola Anoles (*Anolis distichus*). *Evolution*.
2022. Anthony J Geneva, Sungdae Park, Dan G Bock, **Pietro L. H. de Mello**, Fatih Sarigol, Marc Tollis, Colin M Donihue, R Graham Reynolds, Nathalie Feiner, Ashley M Rasys, James D Lauderdale, Sergio G Minchey, Aaron J Alcala, Carlos R Infante, Jason J Kolbe, Dolph Schluter, Douglas B Menke, Jonathan B Losos. Chromosome-scale genome assembly of the brown anole (*Anolis sagrei*), an emerging model species. *Communications Biology*, 4, 1126 (2022).
2021. **de Mello, Pietro L. H.**, Hime, Paul M, Glor, Richard E. Transcriptomic Analysis of Skin Color in Anole Lizards. *Genome Biology and Evolution*. <https://doi.org/10.1093/gbe/evab110>.

2020. Myers, Tanner C., **de Mello, Pietro L. H.**, Glor, Richard E. A morphometric assessment of species boundaries in a widespread anole lizard (Squamata: Dactyloidae). *Biological Journal of the Linnean Society*, 130(4), 813-825.
2017. **de Mello, Pietro L. H.**, Rodrigues, Guth B. F., da Rocha, Wáldima A. da R., Brandão, Reuber A. Calling perch selection and body condition in *Dendropsophus jimi* (Anura: Hylidae). *North-western Journal of Zoology*. Article No. e171507
2015. **de Mello, Pietro L. H.**, Machado, Ricardo B., Nogueira, Cristiano C. Conserving Biogeography: Habitat Loss and Vicariant Patterns in Endemic Squamates of the Cerrado Hotspot. *PLoS ONE*, 10(8): e0133995.

Submitted / In review Refereed Journal Articles

- In review.* Matthew D. Hale, **Pietro L. H. de Mello**, Daniel T. Nondorf, Christopher D. Robinson, Henry B. John-Alder, Christian L. Cox, Robert M. Cox. Widespread male-female expression imbalance of X-linked genes across phrynosomatid lizards.

GRANTS AND FELLOWSHIPS

Received

2022. Rising Scholars Postdoctoral Fellowship. University of Virginia.
- 2019, 2020, 2021. Panorama Small Grant Proposal. Uncovering the genetic architecture of local adaptation: Characterizing the Histological and Chromatographic basis of the dewlap. Sponsor: Biodiversity Institute, University of Kansas. Amount: \$ 1,000.00.
2020. Stansifer Fellowship. We can't protect what we don't understand: The Caribbean as a study system for biodiversity. \$5,000.00.
2019. Leaman Harris Biodiversity Scholarship. Linking genotype to phenotype: Establishing the genotypic and phenotypic basis of lizard pigmentation. Amount: \$3,000.00.
2019. College Graduate Student and Postdoctoral Travel Fund. The genetic basis of anole dewlap color: A diverse trait in an adaptive radiation. Amount: \$800.00.
2019. Full Scholarship – World Congress of Herpetology. The genetic basis of anole dewlap color: A diverse trait in an adaptive radiation. Sponsor: World Congress of Herpetology. Amount: Housing, registration, transportation (NZ\$ 3,500.00).
2018. Genome Sequencing Core Research Vouchers. Unveiling the genetic basis of pigmentation in a model system in ecology and evolutionary biology: A transcriptomic approach. Amount: \$5,102.00
2018. Society of Systematic Biologists. Using gene tree conflict to assess sex-chromosomes' role in an insular anole diversification. Amount: \$2,500.00
2018. Graduate Studies Research Support Award. Roses are red, dewlaps, on the other hand, sometimes yellow, sometimes red... Sponsor: Graduate Studies, University of Kansas. Amount: \$2,500.00.

- 2017, 2018. Panorama Small Grant Proposal. Uncovering the genetic architecture of dewlap color, a polygenic trait under divergent selection. Sponsor: Biodiversity Institute, University of Kansas. Amount: \$ 1,000.00.
2017. Summer Pre-Dissertation Travel Grant: Differentiation with gene flow: Can divergent natural selection across an altitudinal gradient lead to genetic population differentiation? Sponsor: International Programs, University of Kansas. Amount: \$ 1,500.00.
2017. Pre-Orals Doctoral Student Research Funds: Does Selection Across an Altitudinal Gradient Leads to Genetic Population Differentiation? Sponsor: Graduate Studies, University of Kansas. Amount: \$1,461.00.
2016. EEB Summer Funding. Speciation along a heterogeneous ecotone? Revealing hidden patterns and processes. Sponsor: Ecology and Evolutionary Biology Department. Amount: \$ 3,500.00.
2016. Tinker Foundation Field Research Grant: Is the Cordillera Central in the Dominican Republic a barrier to gene flux between two *Anolis distichus* (Cope, 1861) populations? Sponsor: Tinker Foundation (Through the University of Kansas Center of Latin American Studies). Amount: US\$ 1,500.00
2015. Travel Funding for the 1st World Forum for Ecosystem Governance. Sponsor: Alibaba Foundation. Amount: US\$ 2,893.00.
2014. Travel Funding for the 51st Annual Meeting of the Association for Tropical Biology and Conservation. Sponsor: Fundação de Apoio à Pesquisa do Distrito Federal (FAP-DF). Amount: R\$ 10,000.00
2012. Centro de Aperfeiçoamento de Pessoal (CAPES) Master's degree Sponsorship. Sponsor: CAPES. Amount: R\$ 1,300.00/month. Period: 24 months.

SELECTED CONFERENCE ACTIVITY

Oral

2023. From gene, through cell, to color: The making of colorful fish. 2023 University of Virginia Postdoctoral Symposium (**de Mello, P.L.H.**, Parichy, D.M.)
2021. Looking under the hood: The genetic basis of anole color pattern. Evolution 2021, Online. (**de Mello, P.L.H.**, Kelly, J.K., Glor, R.E)
2020. The genetic basis of anole dewlap color: A diverse trait in an adaptive radiation. IX World Congress of Herpetology, Dunedin, Otago, New Zealand (**de Mello, P. L. H.**, Hime, P. H. & Glor, R. E.)
2019. Do sex-chromosomes play a disproportional role in speciation? A study with anoles. IX Brazilian Congress of Herpetology, Campinas, SP, Brazil. (**de Mello, P.L.H.**, Hime, P.H. & Glor, R.E.).
2014. Extinction risk and conservation of endemic squamates in the Cerrado savanna, a highly threatened biodiversity hotspot. Joint Meeting of Ichthyologists and Herpetologists, Chattanooga, U.S.A. (**de Mello, P.L.H.**, Machado, R.B. & Nogueira, C.).
2014. Conservation biogeography: Habitat loss and vicariant patterns in endemic Squamates of the Cerrado hotspot. 51st Annual Meeting of the Association for Tropical Biology and Conservation, Cairn, Australia (**de Mello, P.L.H.**, Machado, R.B. & Nogueira, C.).

Posters

2024. No stripes, no problem: Positional information, morphogenesis, and differentiation of aperiodic color patterns in Trinidadian Guppies (*Poecilia reticulata*). (**de Mello, P. L. H.**, Saunders, L.M., Reznick, D. R., Parichy, D.M.)
2020. Are genetically distinct candidate species also morphologically diagnosable? SSB 2020 – Systematics in the Swamp. (Myers, T., **de Mello, P. L. H.**, Glor, R. E.)
2019. Assembly of an anole sex chromosome. Evolution 2019, Providence, RI. (**de Mello, P.L.H.**, Hime, P.H., Glor R.E.).

Participation

2016. World Forum on Ecosystem Governance, Yuhnu Lake Resort, Beijing, China.

CAMPUS OR DEPARTMENTAL TALKS

2020. The genetic basis of anole dewlap color: A diverse trait in an adaptive radiation. KU EEB Seminars. (**de Mello, P.L.H.**, Hime, P.H., Glor, R.E.).

TEACHING EXPERIENCE/NOMINATION

Lecturer

- UNIP – Universidade Paulista (Paulista University), Federal District, Brazil
- 2014, 2015. Biostatistics to Health Students (3 classes; 40 students each); Ecology (1 class; 60 students); Genetics & Cytogenetics (1 class; 50 students); Toxicology (2 classes; 15 students each); Biogeography (2 classes; 15 students); General Biology to Health Students (1 class; 60 students).

SERVICE TO PROFESSION

Journal Review

- 2022-2023. Genetics.
2022. BMC Genetics.
2022. Scientific Reports.
2021. Molecular Ecology Resources.
2021. Ichthyology & Herpetology.
- 2020 - 2021. Molecular Ecology.
- 2019, 2021. Evolution.
2018. Neotropical Biodiversity.
2017. Checklist.
2017. Journal of Herpetology.

Society/Student Organization Participation

- 2021 – present. Instructor. The Carpentries.
- 2020 – 2022. Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS), University of Kansas Chapter, Member.
- 2017 – 2019. Treasurer. Ecology and Evolutionary Biology (EEB) Graduate Student Organization (GSO).

Workshops

2021. Instructor. Software Carpentry: Version Control with Git. University of Kansas.
2014. Speaker. Herpetology – Past, Present and Future. 1ª Semana Acadêmica de Ciências Biológicas, Universidade Paulista.
2013. Speaker. Basic Notions in SDM (Species Distribution Models). XII Semana da Biologia (SEMABIO), Universidade de Brasília.

SELECTED COMMUNITY INVOLVEMENT/OUTREACH

- 2020-2023. Skype a Scientist. The Edron Academy, Ciudad de México, MX.; Montgomery County Public Schools, MD, USA.; Colegio Internacional Puerto La Cruz, Barcelona, Venezuela; Immaculate Conception School, Los Angeles, CA, USA; Crestwood STEAM Magnet, Rancho Palos Verdes, CA, USA; The Talfourd Lawn Elementary School, NY, USA.
2020. 3 Minute Thesis (3MT), University of Kansas.
2019. Sexy Science. Exhibition of unique reproductive features of Amphibians and Reptiles. Biodiversity Institute, University of Kansas, Lawrence, KS, USA.
2018. Science of the Macabre. Presentation of unorthodox characteristics of Amphibians and Reptiles. Biodiversity Institute, University of Kansas, Lawrence, KS, USA.
2018. DNA Day. Olathe, KS, USA.
2016. Talk for 4th Graders of the Sunflower Elementary on Rainforest Flora and Fauna. Sunflower Elementary School, Lawrence, KS, USA.

SELECTED UNDERGRADUATE MENTORING

Presentations

2021. Krause, Anna M., **de Mello, Pietro L. H.**, Glor, E. Richard. What is the Physical Signature of Climate Change: Adaptation in *A. distichus* Along a Climate Gradient.
2021. Behere, Ashmika, **de Mello, Pietro L. H.**, Glor, E. Richard. Color me Surprised: A Look in the Genetic Architecture of Pigmentation Pattern in Anole Lizards. 2021 SACNAS Meeting, Online.
2019. Myers, Tanner, **de Mello, Pietro L.H.**, Glor, E. Richard. Morphological assessment reveals candidate species of *Anolis* lizards to be truly cryptic. Evolution 2019, Providence, RI.

LANGUAGES

Portuguese: Reading (native), speaking (native), writing (native).
English: Reading (fluent), speaking (fluent), writing (fluent).
French: Reading (excellent), speaking (good), writing (good).
Spanish: Reading (fluent), speaking (fluent), writing (good).
Italian: Reading (excellent), speaking (good), writing (good).

PROFESSIONAL MEMBERSHIPS OR AFFILIATIONS

2019 – 2023.	Society for the Study of Evolution.
2019 – 2020.	Society for the Study of Systematic Biology.
2018 – 2019.	Society for the Study of Amphibians and Reptiles.