

MÓNICA I. PÁEZ-VACAS

PhD in Ecology

Jambatu Center for Amphibian Research and Conservation

Jambatu Foundation

San Rafael, Quito, Ecuador

E-mail: monicapaezv@gmail.com<https://monicapaezvacas.weebly.com/>**EDUCATION**

Ph.D in Ecology. Department of Biology, Colorado State University (CSU), Fort Collins, CO, USA. Advisor: Dr. W. Chris Funk.

Licenciatura Biological Sciences (B.Sc. + two years of independent research). Pontifical Catholic University of Ecuador (PUCE), Quito, Ecuador. Advisor: Dr. Luis A. Coloma

RESEARCH

Evolution, Ecology, Herpetology, Evolutionary Ecology, Population Genetics and Genomics, Conservation, Conservation Genetics, Physiology, Phylogenetics, Systematics.

APPOINTEMENTS

- 2022 –** *Investigator*, Jambatu Center for the Investigation and Conservation of Amphibians, San Rafael, Quito, Ecuador.
- 2016 – 2022** *Principal Professor*, Universidad Tecnológica Indoamérica (UTI), Quito, Ecuador.
- 2016 – 2022** *Curator*, Museum of Zoology of Universidad Tecnológica Indoamérica (MZUTI), Herpetology Section.
- 2018 – 2021** *Chair*, Department of Environmental Sciences, Universidad Tecnológica Indoamérica (UTI), Quito, Ecuador.
- 2018 – 2021** *Undergraduate Program Coordinator*, Engineering in Biodiversity and Genetic Resources, Department of Environmental Sciences, Universidad Tecnológica Indoamérica (UTI), Quito, Ecuador.
- 2009 – 2010** *Research Assistant*, Project "Genetic and Morphological Assessment of Amphibians, Reptiles and Birds in Ecuadorian Andes" (National Secretariat of Science and Technology of Ecuador - Pontifical Catholic University of Ecuador).
- 2003 – 2008** *Undergraduate Research Assistant*, Herpetology Division, Pontifical Catholic University of Ecuador.
- 2007** Design and production of the Course for Basic Education Teachers about Global Environmental Citizenship (Project managed by the IUCN).

HONORS, SCHOLARSHIPS, AND FELLOWSHIPS

- 2014 – 2015** President, Latin American Students and Scholars Organization, Colorado State University.
- 2013 – 2014** Global Sustainability Leadership Fellowship, SoGES, Colorado State University.
- 2012 – 2016** *Scholarship for Graduate Studies Abroad 2012*, National Secretariat of Science, Technology and Superior Education of Ecuador. (\$109,070.80)
- 2012 – 2013** International Presidential Fellowship, Colorado State University.
- 2010 – 2012** Fulbright Foreign Student Program. (\$26,625)
- Barsa Scholarship Award*, De Sá InterAmerican Foundation. (\$6,000)
- 2002** *Scholarship for Academic Excellence*, Pontifical Catholic University of Ecuador.

FUNDED GRANTS

2022	Back from the brink: harnessing genomic tools to help reverse declines in an emblematic Andean Harlequin frog. <i>Revive & Restore Wild Genomes – Amphibians</i> . (\$149,162 pending)
2022	Evolutionary ecology for the conservation of amphibians. <i>Universidad Tecnológica Indoamérica</i> . (\$25,000)
2020	<i>Jambatu's second chance: saving an emblematic Andean frog from extinction</i> , National Geographic Society. (\$50,000)
2017 – 2021	Ecology, evolution, and conservation of amphibians in the Andes of Ecuador, <i>Universidad Tecnológica Indoamérica</i> . (\$108,000)
2016	Doctoral Dissertation Improvement Grant (DDIG), <i>National Science Foundation</i> . (\$19,000)
2015	Lewis and Clark Fund for Exploration and Research. <i>American Philosophical Society</i> . (\$4,900)
2014	Graduate Degree Program in Ecology Travel Grant, Colorado State University. (\$600) Biology Department Travel Grant, Colorado State University. (\$1,500) Honorable Mention, <i>E.E. Williams Research Grant Award</i> .
2013	<i>Graduate Degree Program in Ecology Research Grant</i> , Colorado State University. (\$1,600)
2008	<i>Ernst Mayr Travel Grant in Animal Systematics</i> , Museum of Comparative Zoology at Harvard University, Cambridge MA, USA. (\$1,500)
2002	<i>Scholarship for Academic Excellence</i> , Pontifical Catholic University of Ecuador (40% of Semester Tuition).

RELEVANT PUBLICATIONS

^UUndergraduate student; ^GGraduate student

Published:

Páez-Vacas, M.I. et al (UTI undergraduate students). (*In press*). Citizen science as a tool for education: First Bioblitz in Quito, Ecuador. In *2nd Congress in Sustainability, Energy and City*. Springer, Cham.

Jaynes, K.^G, **Páez-Vacas, M.**, Salazar-Valenzuela, D., Guayasamin, J., Terán-Valdez, A., Siavichay, F., Fitzpatrick, S.W., Coloma, L.A. (2022). Harlequin frog rediscoveries provide insights into mechanisms of persistence in the face of drastic amphibian declines. *Biological Conservation*, 276:109784.

◇ Media Coverage: [Science](#), [Science News](#), [MSU Today](#)

Páez-Vacas, M. I., Trumbo, D. R., & Funk, W. C. (2022). Contrasting environmental drivers of genetic and phenotypic divergence in an Andean poison frog (*Epipedobates anthonyi*). *Heredity*, 1-12.

◇ Selected as “Editor’s Choice” article in **Heredity**

◇ Featured on the cover of **Heredity**

Morales-Espín, B.^U, Ortiz, F., Sánchez-Lara^U, E., **Páez-Vacas, M.**, Muñoz-Lara^U, K., Bravo-Vera, E.^U, ... & Tobes, I. (2022). Understanding the Relation with Nature in the City: Biodiversity Knowledge and Environmental Awareness in a Periurban Area of Quito, Ecuador. In *Congress in Sustainability, Energy and City* (pp. 70-80). Springer, Cham.

Oleas, N. H., Valencia, K.^U, Peña, P.^G, **Páez-Vacas, M.**, Salazar, L., & Tobes, I. (2021). BioCamb: 10 años contribuyendo al conocimiento de la biodiversidad en el Ecuador. *CienciAmérica*, 10(2), 1-6.

Zapata, D.^G, Oleas, N. H., **Páez-Vacas, M.**, & Tobes, I. (2021, March). Water Quality Assessment of the Cutuchi River Basin (Ecuador): A Review of Technical Documents. In *IOP Conference Series: Earth and Environmental Science* (Vol. 690, No. 1, p. 012058). IOP Publishing.

Salazar, L., **Páez-Vacas, M.**, Kessler, M., Kluge, J., & Homeier, J. (2021, March). Variation of Foliar Calcium and Magnesium in Six Fern Species at Different Elevations. In *IOP Conference Series: Earth and Environmental Science* (Vol. 690, No. 1, p. 012056). IOP Publishing.

Oleas, N., Melo-Gonzalez, C. J., Tobes-Sesma, I., Salazar, L., Falconí-López, A.^G, **Páez-Vacas, M.**, ... & Endara, M. J. (2020). Impacto de COVID-19 en la investigación de la Biodiversidad en Ecuador. *CienciAmérica*, 9(2), 120-137.

Salerno, P. E., **Páez-Vacas, M.**, Guayasamin, J. M., & Stynoski, J. L. (2020). Correction: Male principal investigators (almost) don't publish with women in ecology and zoology. *Plos one*, 15(5), e0233803.

Salerno, P.E., **Páez-Vacas, M.I.**, Guayasamin, J.M., J.L. Stynoski. (2019) Male principal investigators (almost) don't publish with women in ecology and zoology. *PloS one*, 14(6), e0218598.

Fitak, R. R., Antonides, J. D., Baitchman, E. J., Bonaccorso, E., Braun, J., Kubiski, S., **Páez-Vacas, M. I.**, ... & Malmberg, J. L. (2019). The expectations and challenges of wildlife disease research in the era of genomics: forecasting with a horizon scan-like exercise. *Journal of Heredity*, 110(3), 261-274.

Páez-Vacas, M. I., & Oleas, N. H. (2019). Isolation and characterization of 12 microsatellite loci in *Epipedobates anthonyi* (Amphibia: Anura: Dendrobatidae) for population genetic analysis. *Molecular biology reports*, 1-4.

Robertson, J. M., Murphy, M. A., Pearl, C. A., Adams, M. J., **Páez-Vacas, M. I.**, Haig, S. M., ... & Funk, W. C. (2018). Regional variation in drivers of connectivity for two frog species (*Rana pretiosa* and *R. luteiventris*) from the US Pacific Northwest. *Molecular Ecology*, 27(16), 3242-3256.

Páez-Vacas, M.I., Coloma, L.A., & Santos, J. C. (2010). Systematics of the *Hyloxalus bocagei* clade (Anura: Dendrobatidae), recognition of *H. maculosus* and description of two new species, *Zootaxa* 2711:1-75. Undergrad Honor's Thesis.

Under review/ in revision:

Páez-Vacas, M.I., W.C. Funk. Thermal limits along tropical elevation gradients: poison frogs' tadpoles show plasticity but maintain divergence across elevation. *In revision*.

Bertola, L., Bruford, M., Brüniche-Olsen, A., Cadena, C. D., Ewart, K., De Bruyn, M., Eldridge, M., Frankham, R., Guayasamin, J., Grueber, C., Hoareau, T., Hoban, S., Hohenlohe, P., Hunter, M.,

Kershaw, F., Kotze, A., Lacy, R., Laikre, L., Lo, N., MacDonald, A., Meek, M., Mergenay, M., Mittan, C., Neaves, L., O'Brien, D., Ochieng, J., Ogden, R., Orozco-terWengel, P., Otiende, M., **Páez-Vacas, M.**, Pierson, J., Ralls, K., Ramakrishnan, U., Russo, I-R., Shaw, R., Sogbohossou, E., Stow, A., Steeves, T., Sunnucks, P., Vernesi, C., Segelbacher, G. A pragmatic approach for integrating genetics into biodiversity conservation. *Submitted to Conservation Science and Practice*.

In preparation (manuscript drafted, <3 months until submission):

Páez-Vacas, M.I., Maldonado, G.^G, P.E. Salerno, B. Forester, C. Kozakiewicz, W.C. Funk. Harnessing genomics to understand local adaptation of a poison frog species along elevational gradients in the Andes.

Páez-Vacas, M.I., W.C. Funk. Local adaptation along tropical elevation gradients: insights from a reciprocal transplant experiment of a poison frog in the Andes.

Banse, M.^G, Pintanel, P., Morales-Espín, B.^U, Del Castillo, N.^U, Funk, W.C., **Páez-Vacas, M.I.** Intraspecific variation in maximum thermal performance of a poison frog populations' is not related to elevation.

Páez-Vacas, M.I., Carvajal-Endara, S., Baer N., Vizcaíno-Barba, M., Guayasamin, J.M., et al. A poor researcher's approach to detect endangered amphibians using environmental DNA.

Sánchez, S.R.^G, Donoso, D.A., **Páez-Vacas, M.I.** Diet specialization in aposematic vs. cryptic sympatric species of poison frogs: they are both picky, but they choose different meals.

Domínguez, D.F.^G, **Páez-Vacas, M.I.**, Donoso, D.A. Diet specialization of a poison frog along elevational gradients in the Andes.

Book chapters

In preparation:

Coloma, L.A., Carvajal-Endara, S., Páez-Vacas, M.I., Santos, F. Declines, extinction, and conservation. In: Coloma, L.A., and W. Duellman (eds). *Amphibians of Ecuador*. Taylor and Francis.

TEACHING EXPERIENCE

2016 – 2022 *Principal professor*, Universidad Tecnológica Indoamérica (UTI), Quito, Ecuador.

Undergraduate courses:

Environmental issues (1x),

Science writing and science communication (4x),

Introduction to Genetics (6x),

Practical Field Techniques (2x),

Conservation Genetics (6x),

Recitation on Biodiversity, Ecology, Evolution, and Conservation (1x).

Graduate courses:

Biodiversity and ecological processes (3x).

2019 – 2020 Certification Program in Higher Education and Research, CIFE, Mexico (320 hours).

2012 – 2013 *Graduate Teaching Assistant*, Colorado State University.

Introduction to Biology (1x)
 Herpetology (1x)
 Tropical Ecology and Evolution: Tropical Freshwater Systems (*Guest Lecturer*)
 Molecular Ecology: Metagenomics (*Guest Lecturer*)

STUDENTS ADVISED AND STUDENTS COMMITTEE

Graduate students advised

2020 – 2022 Gabriela Maldonado. Master in Biodiversity and Climate Change, UTI.
 2020 – 2021 Santiago Sánchez. Master in Biodiversity and Climate Change, UTI.
 2018 Marine Banse. TROPIMUNDO Erasmus Mundus Joint Master's Degree in Tropical Biodiversity and Ecosystems.

Graduate students committee

2018 – Kyle Jaynes. PhD in Ecology, Evolution, and Behavior Program, Kellogg Biological Station, Michigan State University
 2022 Kathya Bustamante. Master in Biodiversity and Climate Change, UTI.
 2022 Washington Pruna. Master in Biodiversity and Climate Change, UTI.
 2021 Ana Belén Carrillo. Master in Biodiversity and Climate Change, UTI.
 2020 Manuel Dueñas. Master in Biodiversity and Climate Change, UTI.

Undergraduate Honor's thesis

2022 Nicolás Del Castillo. Biology. Universidad Central del Ecuador.
 2021 Flor Ortiz. Biodiversity and Genetics. Universidad Tecnológica Indoamérica.
 2020 Belén Morales. Biodiversity and Genetics. Universidad Tecnológica Indoamérica.

Undergraduate mentees (selected)

2022 Sharon Beltrán, UTI.
 Jean Pierre Carrillo, UTI.
 Isaac Minda, UTI.
 2021 Edwin Almeida, UTI.
 2019 Nicolás Del Castillo, UCE.
 2018 Belén Morales, UTI.
 Enmily Sánchez, UTI.

PRESENTATIONS

Conference abstracts

2021 Juan C Santos, Joseph De Leon, Kyle Jaynes, Priyanka Gera, Randy Ortiz, **Mónica Páez-Vacas**, David Salazar, Luis A. Coloma, Sarah Fitzpatrick. Evolution of Toll-Like Receptors (TLRs) in Neotropical Amphibians and their Relationship with *Bd* Infection. Virtual Stand-Alone Conference of The American Society of Naturalists. 9-11 January 2021.
 Priyanka Gera, Joseph De Leon, Kyle Jaynes, Randy Ortiz, **Mónica Páez-Vacas**, David Salazar, Luis A. Coloma, Sarah Fitzpatrick, Juan C. Santos. Diversification and Evolution of Chitinase 1 (CHIT1) in Neotropical Frogs: An Enzyme at the Forefront Against *Bd* Infection. Virtual Stand-Alone Conference of The American Society of Naturalists. 9-11 January 2021.
 2019 **Páez-Vacas, Mónica I.**, Patricia Salerno, Brenna Forrester, Chris Kozakiewicz, JD Santillana-Ortiz, W. Chris Funk. Using genomics to understand local adaptation of a poison frog species along elevational gradients in the Andes. IBS 2019 Humboldt Meeting & 2nd Latin American Biogeography Meeting, Quito, Ecuador.
Páez-Vacas, M.I., W. Chris Funk. "Effects of temperature variation along elevational gradients in the

- Andes: the case of a poison frog". IBS 2019 Humboldt Meeting & 2nd Latin American Biogeography Meeting, Quito, Ecuador.
- 2018 **Páez-Vacas, M. I.**, P. Salerno, B. Forrester, C. Kozakiewicz, JD Santillana-Ortiz, W. C. Funk. Harnessing genomics to understand processes of population divergence in the Andes: the case of a little poison frog. V Congreso Colombiano de Zoología, Bogotá, Colombia. [In Spanish].
- Páez-Vacas, M.I.**, P. Salerno, J. M. Guayasamin, J. Stynoski. Bias in publications in Ecology and Zoology: do male principal investigators publish less with women than with males? I Simposio Colombiano de Mujeres en la Ciencia, V Congreso Colombiano de Zoología, Bogotá, Colombia. [In Spanish].
- 2017 **Páez-Vacas, M.I.**, D. R. Trumbo, W. C. Funk. Mechanisms of population divergence along elevational gradients in a poison frog from the Andes, XI Latin American Congress of Herpetology, Quito, Ecuador. [In Spanish].
- Páez-Vacas, M.I.**, P. Salerno, J. M. Guayasamin, J. Stynoski. Is there less representation of female authors in herpetological journals in Latin America? XI Latin American Congress of Herpetology, Quito, Ecuador. [In Spanish].
- 2016 **Páez-Vacas, M.I.**, D. R. Trumbo, W. C. Funk. Phenotypic divergence despite gene flow along elevational gradients in a poison frog in the Andes, Evolution 2016, Austin, Texas, EUA.
- 2015 **Páez-Vacas, M.I.** Population genetic structure an Andean poison frog, Society for the Study of Amphibians and Reptiles 2015, Lawrence, Kansas.
- Páez-Vacas, M.I.** Gene flow along elevation in an Andean poison frog, Evolution 2015, Guarujá, Brazil.
- 2014 **Páez-Vacas, M.I.** Natural selection in the Andes: thermal tolerance of tadpoles of *Epipedobates anthonyi* (Anura: Dendrobatidae), X Congreso Latinoamericano de Herpetología, Cartagena, Colombia. [In Spanish].
- Páez-Vacas, M.I.** "Thermal limits of an Andean poison frog". Annual Guild of Rocky Mountain Ecologists and Evolutionary Biologists meeting. Pingree Park, Colorado State University, CO.
- 2012 Robertson, J., **Páez-Vacas, M.I.**, Murphy, M.A., Pearl, C.A., Adams, M.J., Haig, S.M., Funk, W.C. "Mountains, deserts, and frogs: striking regional variation in landscape effects on gene flow". 1st Joint Congress of Evolutionary Biology, Ottawa, Canada.
- 2008 **Páez-Vacas, M.I.** "Taxonomy of the *bocagei* clade (Anura:Dendrobatidae)". VIII Congreso Latinoamericano de Herpetología, Varadero, Cuba. [In Spanish].
- 2006 **Páez-Vacas, M.I.** "Systematics of the *bocagei* clade (Anura: Dendrobatidae)". 30th Jornadas Ecuatorianas de Biología, Sociedad Ecuatoriana de Biología, Quito, Ecuador. [In Spanish].
- 2005 **Páez-Vacas, M.I.** "Matricial keys for identification: an example in dendrobatid frogs". 29th Jornadas Ecuatorianas de Biología, Sociedad Ecuatoriana de Biología, Manta, Ecuador. [In Spanish].

Invited presentations

- 2022 **Páez-Vacas, M.I.** Panel discussion: Women in Latin American Herpetology, Colombia [In Spanish]. Declined.
- Páez-Vacas, M.I.** Ecology, evolution and conservation of harlequin and poison frogs in the Ecuadorian Andes. *Universidad de Playa Ancha*. Valparaíso, Chile. [In Spanish].
- 2020 **Páez-Vacas, M.I.**, P. Salerno, J.M. Guayasamin, J. Stynoski. Women representation in Ecology in and out of Latin America. *Conversatorio de Biodiversidad*. Universidad Tecnológica Indoamérica, Quito, Ecuador. [In Spanish].
- 2019 **Páez-Vacas, M.I.** Poison frogs along elevational gradients in the Andes: what can they tell us about mechanisms of population divergence? Kellogg Biological Station, Michigan State University.
- Páez-Vacas, M.I.**, P. Salerno, J.M. Guayasamin, J. Stynoski. Bias in publications in Ecology and Zoology: do male principal investigators publish less with women than with males? [In Spanish]. *Estado actual y perspectiva de las mujeres en la Academia*. Pontificia Universidad Católica del Ecuador, Quito, Ecuador. [In Spanish].

- 2018 **Páez-Vacas, M.I.** Mechanisms of population divergence along elevational gradients in the tropics, Pontificia Universidad Católica del Ecuador, Quito, Ecuador. [In Spanish].
- 2017 **Páez-Vacas, M.I.** Mechanisms of population divergence along elevational gradients in the tropics. IV Ciclo de Conferencias de Investigación, Universidad Central del Ecuador, Quito, Ecuador. [In Spanish].
Páez-Vacas, M.I. Mechanisms of population divergence along elevational gradients in the tropics. Coloquios de Ecología, Universidad San Francisco de Quito, Quito, Ecuador. [In Spanish].
- 2016 **Páez-Vacas, M.I.** Mechanisms of population divergence along elevational gradients in the tropics. Conversatorios de Biodiversidad, Universidad Tecnológica Indoamérica, Quito, Ecuador. [In Spanish].
- 2015 **Páez-Vacas, M.I.** Microevolution of a poison frog in the Andes. Tropical Ecology and Evolution, Colorado State University.
Páez-Vacas, M.I. Mechanisms of speciation in the Andes: gene flow, natural selection, and sexual selection of *Epipedobates anthonyi* (Anura: Dendrobatidae), Universidad del Azuay, Cuenca, Ecuador. [In Spanish].
- 2014 **Páez-Vacas, M.I.** Natural selection in the Andes: thermal tolerance of tadpoles of *Epipedobates anthonyi* (Anura: Dendrobatidae), Centro Jambatu for Research and Conservation of Amphibians (Otonga Foundation), Quito, Ecuador. [In Spanish].
Páez-Vacas, M.I. Mechanisms of speciation in the Andes: gene flow, natural selection, and sexual selection of *Epipedobates anthonyi* (Anura: Dendrobatidae), Universidad Tecnológica Indoamérica, Quito, Ecuador. [In Spanish].

COURSES, WORKSHOPS, AND OTHER PROFESSIONAL SERVICE

- 2021 – 2022 *Director*, Outreach Project: “Quito alive: participatory inventories of biodiversity in two urban parishes to enhance environmental awareness”, Department of Environmental Sciences, Universidad Tecnológica Indoamérica (UTI), Quito, Ecuador.
- 2021 – 2022 *Mentor*, POWER Program (Providing Opportunities for Women’s Economic Rise), First and second editions, US Embassy, Ecuador.
- 2022 *Invited speaker*, Female scientists take over the Zoo. Fundación Zoológica del Ecuador. [In Spanish].
- 2021 *Invited speaker*, Scientists take over the Zoo. Fundación Zoológica del Ecuador. [In Spanish].
- 2019 *Co-organizer*, Symposium "Biogeography in the age of genomics: case studies at different spatial and temporal scales", International Biogeography Society 2019 Humboldt Meeting, Ecuador.
Co-organizer, City Nature Challenge in Quito, Ecuador.
- 2017 *Co-organizer*, Symposium “Women in Latin American Herpetology: achievements and challenges/ Mujeres herpetólogas en Latinoamérica: logros y desafíos”, XI Latin American Congress of Herpetology, Quito, Ecuador.
Co-organizer, RADseq workshop, XI Latin American Congress of Herpetology.
- 2014 *Co-organizer*, Annual Guild of Rocky Mountain Ecologists and Evolutionary Biologists meeting. Pingree Park, Colorado State University, CO.
Co-organizer, Phylogenetic Comparative Methods in R, University of Massachusetts, NSF, Universidad de los Andes. Bogotá, Colombia.
Co-organizer, Training in the Management of Biodiversity Information at the Genetic Level, Ministry of Environment of Ecuador, ProCambio-GIZ Program/UDLA, Quito, Ecuador.
Co-organizer, Genomic Tools for Analyzing Biodiversity, Colorado State University, Indiana State University, Universidad Técnica Particular de Loja, Loja, Ecuador.
- 2013 *Co-organizer*, Annual Guild of Rocky Mountain Ecologists and Evolutionary Biologists meeting. Pingree Park, Colorado State University, CO.
Co-organizer, Workshop on Phylogenetics, National Evolution Synthesis Center, USA (NESCent), Universidad Tecnológica Indoamérica. Quito, Ecuador.

- Herpetologists' League's website translation to Spanish.
- 2009 GIS methods for modelling species distribution and their applications in conservation, ecology and evolution, Pontifical Catholic University of Ecuador, 65 hours. Quito, Ecuador.
- 2006 GIS Applications to Ecology, Pontifical Catholic University of Ecuador, 64 hours. Quito, Ecuador.
- 2005 DNA extraction, amplification, and sequencing. University of Richmond. Richmond, VA, USA.
- 2005 Workshop for using LUCID Professional version 3 to elaborate matricial keys for identification, Pontifical Catholic University of Ecuador, Centre for Biological Information Technology, The University of Queensland. Quito, Ecuador.

Professional Reviewer for: *Molecular Ecology, Functional Ecology, Ecography, Herpetologica, South American Journal of Herpetology, Zootaxa, Neotropical Biodiversity, Revista de Biología Tropical*. Reviewer for application to "E.E. Williams" Research Grant, Herpetologists' League (2017).

Member: Society for the Study of Evolution, Society for the Study of Amphibians and Reptiles, Herpetologists' League, Jambato Alliance for the Conservation of the Jambato frog (www.alianzajambato.org).

LANGUAGES

Spanish: Native.

English: Spoken, written, and read fluently.

Portuguese: Spoken, written, and read fluently. CELPI-Bras, Advanced-Superior, 2005.

French: Spoken, written, and read fluently. DELF-B2 (Advanced), 2009.