# Henrique Braz, Ph.D.

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#### **Education**

#### Ph.D. Sciences (Vertebrate Anatomy)

2009-2013

University of São Paulo (São Paulo, Brazil)

Thesis: Evolution of viviparity in South American water snakes

Advisor: Selma Almeida-Santos

#### M.Sc. Biotechnology

2007-2009

University of São Paulo (São Paulo, Brazil)

Thesis: Egg retention and egg incubation in snakes

Advisor: Selma Almeida-Santos

#### **B.Sc. Biology** 2001–2005

Nove de Julho University (São Paulo, Brazil)

Thesis: Feeding strategies and adaptations in the common lancehead snake

Advisor: Maria de Fatima Furtado

#### **Research Experience**

**Postdoctoral Researcher** with Dr. Selma Almeida-Santos Laboratory of Ecology and Evolution, Butantan Institute, Brazil 2019-2022

- Conceived (with supervisor) and conducted a review study that used
   *phylogenetic comparative methods* to reconstruct the evolution of sperm
   storage in squamate reptiles. This project resulted in one invited book
   chapter providing a scenario for the evolution of female sperm storage in
   early snakes.
- Used a range of *phylogenetic comparative methods* to test hypotheses on the selective pressures favoring the evolution of viviparity (live birth) in squamate reptiles using a snake clade as a model system. This paper is in preparation.
- Collated and managed a database with multiple entries on squamate sperm storage traits.
- Conceived and supervised an undergraduate student's research project.
- Authored/co-authored 13 papers in peer-reviewed journals.

**Postdoctoral Research Fellow**, Prof. Mike Thompson's Lab School of Life and Environmental Sciences, University of Sydney, Australia 2015-2017

- Conceived and conducted a research project that employed phylogenetic comparative methods and microscopic techniques to test hypotheses on the proximate mechanisms for eggshell loss and placental formation during the evolution of viviparity. This project resulted in one conference presentation and one peer-reviewed publication.
- Quickly learned statistical programming in R, new phylogenetic methods, and microscopic techniques (histochemistry and electron microscopy).
- Authored additional two papers and co-authored two others in peerreviewed journals.

Research Associate 2013–2015

Laboratory of Ecology and Evolution, Butantan Institute, Brazil

- Conceived and conducted research projects on the reproductive biology and natural history of snakes and lizards.
- Coordinated a team of seven researchers (including me) and compiled each one's writing into a paper that provided guidelines for studies in reproductive biology.
- Co-founded the Squamate Reproduction Research Group, which has (i) provided a scientific environment for the training of dozens of students, (ii) published 100+ papers, and (iii) offered ten courses and two workshops.
- Learned to prepare and interpret histological slides.
- Authored two papers and co-authored two others in peer-reviewed journals.

**Ph.D. Student** supervised by Dr. Selma Almeida-Santos Laboratory of Ecology and Evolution, Butantan Institute/University of Sao Paulo, Brazil 2009-2013

- Conceived and conducted a research project that employed
   *phylogenetic comparative methods* to test anatomical and ecological
   hypotheses on the evolution of viviparity in squamate reptiles using a
   snake clade as a model system.
- Developed skills in data analysis (phylogenetic comparative methods), anatomical techniques, and geographic information system (GIS).
- Awarded for the best Ph.D. thesis concluded in the Butantan Institute in 2013.

• Conceived and supervised research projects of two undergraduate students and one graduate trainee student.

**MSc Student** supervised by Dr Selma Almeida-Santos Laboratory of Ecology and Evolution, Butantan Institute/University of Sao Paulo, Brazil 2007-2009

- Conceived (with advisor) and conducted a research project that (1)
  determined the maximum embryonic developmental stage in utero and
  (2) experimentally tested the effects of incubation temperature on eggs,
  embryos, and hatchlings in snakes.
- Developed skills related to experimental research design and data analysis.

#### **Graduate Trainee Biologist**

2005-2007

Laboratory of Herpetology, Butantan Institute, Brazil

 Conceived and conducted a research project that produced evidencebased guidelines to improve husbandry strategies for non-venomous snake colonies. This project resulted in one conference presentation and two peer-reviewed publications.

#### **Publications**

#### Peer-reviewed publications

- 30. \*Marinho PS, Ortega-Chinchilla JE, **Braz HB**, Almeida-Santos SM. Effects of pregnancy on body temperature of the South American rattlesnake, *Crotalus durissus*, in southeastern Brazil. South American Journal of Herpetology, vol. 23, no. 1, p. 67-74, 2022.
- 29. Khouri RS, Fiorillo BF, **Braz HB**, Almeida-Santos SM, Maciel JH, Martins M. Reproductive ecology of the Amaral's Blind Snake, *Trilepida koppesi*, in an area of Cerrado in southeastern Brazil. Herpetological Journal, vol. 32, no. 2, p. 70-79, 2022.
- 28. Fonseca WL, Correa RR, Oliveira AS, **Braz HB**, Almeida-Santos SM, Bernarde PS. First report of male-male combat in free-ranging Amazonian common lanceheads, *Bothrops atrox*. Canadian Journal of Zoology, vol. 100, no. 3, p. 239-242, 2022.
- 27. Silva KMP, \*\*Braz HB, Kasperoviczus KN, Marques OAV, Almeida-Santos SM. Reproduction in the pitviper *Bothrops jararacussu*: large females increase their

<sup>\*</sup>Publication co-authored with supervised or mentored students

<sup>\*\*</sup>Corresponding author when I was not the first or senior author

- reproductive output while small males increase their potential to mate. Zoology, vol. 142, p. 125816, 2020.
- 26. **Braz HB**. *Helicops gomesi*. Diet and Reproduction. Herpetological Review, vol. 51, no. 4, p. 866-867, 2020.
- 25. **Braz HB**, Scartozzoni RR. *Thamnodynastes strigatus* (Coastal House Snake). Reproduction. Herpetological Review, vol. 51, no. 4, p. 880, 2020.
- 24. \*Migliore SN, Mendes A, **Braz HB**. *Placosoma glabellum*. Reproduction. Herpetological Review, vol. 51, no. 2, p. 334-335, 2020.
- 23. \*Migliore SN, **Braz HB**. *Ecpleopus gaudichaudii*. Reproduction. Herpetological Review, vol. 51, no. 2, p. 330-331, 2020.
- 22. \*Migliore SN, **Braz HB**, Gasparotto V, Dias R, Almeida-Santos SM. *Trachylepis atlantica* (Noronha skink). Reproduction. Herpetological Review, vol. 51, no. 1, p. 132-133, 2020.
- 21. **Braz HB**, Kasperoviczus KN, Guedes TB. Reproductive biology of the fossorial snake *Apostolepis gaboi*: A threatened and poorly known species from the Caatinga region. South American Journal of Herpetology, vol. 14, no. 1, p. 37-47, 2019.
- 20. **Braz HB**. *Micrurus corallinus* (Coral Snake). Reproduction. Herpetological Review, vol. 50, no. 2, p. 395, 2020.
- 19. Nogueira CC, Argôlo AJS, Arzamendia V, Azevedo JA, Barbo FE, Bérnils RS, Bolochio BE, Borges-Martins M, Brasil-Godinho M, Braz HB, Buononato MA, Cisneros-Heredia DF, Colli GR, Costa HC, Franco FL, Giraudo A, Gonzalez RC, Guedes TB, Hoogmoed MS, Marques OAV, Montingelli GG, Passos P, Prudente ALC, Rivas G, Sanchez PM, Serrano FC, Silva-Jr NJ, Strussmann C, Vieira-Alencar JPS, Zaher H, Sawaya RJ, Martins M. Atlas of Brazilian snakes: Verified point-locality maps to mitigate the Wallacean shortfall in a megadiverse snake fauna. South American Journal of Herpetology, vol. 14, sp. 1, p. 1-274, 2019.
  - Top-downloaded article during Jan-Apr 2020.
  - Article reported on in the Pesquisa Fapesp and UFJF Notícias.
- 18. von May R, Albuquerque NR, **Braz HB**, Santa-Cruz R, Biggi E, Tomasinelli F, Rabosky DL. Distribution of the Neotropical water snakes *Hydrops caesurus*, *H. martii*, and *H. triangularis* in South America, with new records from Peru and Brazil. Amphibian and Reptile Conservation, vol. 13, no. 1, p. 122-142, 2019.
- 17. **Braz HB**, Almeida-Santos SM, Murphy CR, Thompson MB. Uterine and eggshell modifications associated with the evolution of viviparity in South American water snakes (*Helicops* spp.). Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, vol. 330, no. 3, p. 165-180, 2018.
- 16. \*Bassi EA, de Oliveira C, **Braz HB**, Almeida-Santos SM. How does oocyte uptake occur? A macroscopic study of the ovarian and oviductal modifications for egg capture in the coral snake, *Micrurus corallinus*. The Anatomical Record, vol. 301, no. 11, p. 1936-1943, 2018.
- 15. Guedes TB, Sawaya RJ, Zizka A, Laffan S, Faurby S, Pyron RA, Bérnils RS, Jansen M, Passos P, Prudente ALC, Cisneros-Heredia DF, **Braz HB**, Nogueira CC, Antonelli A.

- Patterns, biases and prospects in the distribution and diversity of Neotropical snakes. Global Ecology and Biogeography, vol. 27, no. 1, p. 14-21, 2018.
  - Article reported on in the Goeldi Museum Agency and ((o))eco
- 14. \*Migliore SN, **Braz HB**, Barreto-Lima AF, Almeida-Santos SM. Reproductive timing and fecundity in the Neotropical lizard *Enyalius perditus*. Acta Herpetologica, vol. 12, no. 2, p. 187-191, 2017.
- 13. **Braz HB**, Scartozzoni RR, Almeida-Santos SM. Reproductive modes of the South American water snakes: A study system for the evolution of viviparity in squamate reptiles. Zoologischer Anzeiger, vol. 263, no. 7, p. 33-44, 2016.
- 12. **Braz HB**, Marques OAV. Tail-first ingestion of prey by the false coral snake, *Erythrolamprus aesculapii*: Does it know where the tail is? Salamandra, vol. 52, no. 2, p. 211-214, 2016.
- 11. **Braz HB**, Heredias-Ribas CM, do Valle RR. *Apostolepis dimidiata*. Reproduction. Herpetological Review, vol. 46, no. 3, p. 443, 2015.
- 10. **Braz HB**, Kasperoviczus KN, Almeida-Santos SM. Reproductive ecology and diet of the fossorial snake *Phalotris lativittatus* in the Brazilian Cerrado. Herpetological Journal, vol. 24, no. 1, p. 49-57, 2014.
- 9. Almeida-Santos SM, **Braz HB**, Santos LC, Sueiro LR, Barros VA, Rojas CA, Kasperoviczus KN. Reproductive biology of snakes: recommendations for data collection and analysis [in Portuguese]. Herpetologia Brasileira, vol. 3, no. 1, p. 14-24, 2014.
- 8. \*Migliore SN, **Braz HB**, Almeida-Santos SM. Reproductive aspects of two *Enyalius* lizards from the Atlantic Forest in southeastern Brazil. Herpetology Notes, vol. 7, p. 273-276, 2014.
- 7. \*Torello-Viera NF, Araújo DP, **Braz HB**. Annual and daily activity patterns of the snaileating snake *Dipsas bucephala* in southeastern Brazil. South American Journal of Herpetology, vol. 7, no. 3, p. 252-258, 2012.
- 6. **Braz HB**, Rocha MMT, Furtado MFD. Maintaining rear-fanged snakes for venom production: an evaluation of mortality and survival rates of *Philodryas olfersii* and *P. patagoniensis* in captivity. The Journal of Venomous Animals and Toxins including Tropical Diseases, vol. 18, no. 2, p. 164-172, 2012.
- 5. **Braz HB**, Manço DG. Natural nests of the false-coral snake *Oxyrhopus guibei* in southeastern Brazil. Herpetology Notes, vol. 4, p. 187-189, 2011.
- 4. **Braz HB**, Araujo CO, Almeida-Santos SM. Life-history traits of the snake *Phalotris lativittatus* from the Brazilian Cerrado. Herpetology Notes, vol. 2, p. 163-164, 2009.
- 3. **Braz HB**, Almeida-Santos SM. *Dipsas indica bucephala* (Snail-eating snake): Reproduction. Herpetological Bulletin, vol. 106, p. 36-38, 2008.
- 2. **Braz HB**, Franco FL, Almeida-Santos SM. Communal egg-laying and nest sites of the goo-eater snake *Sibynomorphus mikanii* in southeastern Brazil. Herpetological Bulletin, vol. 106, p. 26-30, 2008.

1. **Braz HB**, Hess PL, Rocha MMT, Furtado MFD. *Liophis miliaris* (Common water snake): Cannibalism. Herpetological Bulletin, vol. 97, p. 36-37, 2006.

#### **Invited book chapter**

1. **Braz HB**, Almeida-Santos SM. The evolution of sperm storage location in Squamata, with particular reference to snakes. In: The Origin and Early Evolution of Snakes, pp. 389-409, Gower D, Zaher H (eds). Cambridge: Cambridge University Press.

Fellowships and Grants	
National Council for Scientific and Technological Development	2015–2017
Research Fellowship  Project: Uterine and eggshell modifications associated with the evolution of viviparity in South American water snakes	
Coordination for the Improvement of Higher Education Personnel Research Fellowship	2015
<i>Project</i> : Uterine and eggshell modifications associated with the evolution of viviparity in South American water snakes	
São Paulo Research Foundation Ph.D. Scholarship  Project: Evolution of viviparity in hydropsine snakes	2010–2013
São Paulo Research Foundation M.Sc. Scholarship  Project: Egg retention and egg incubation in snakes	2007–2009
Administrative Development Foundation Trainee Program Scholarship	2005–2007

#### **Awards**

Top-downloaded article from the South American Journal of Herpetology during Jan-Apr 2020 through BioOne Complete – a full-text database of over 200 independently published journals focused on the biological, ecological, and environmental sciences.

2020

• Article: Atlas of Brazilian snakes: verified point-locality maps to mitigate the Wallacean shortfall in a megadiverse snake fauna

#### Young Scientist Award - Ph.D. Category

2013

Butantan Institute, Brazil

 Awarded for the best Ph.D. thesis concluded in the Butantan Institute in 2013.

- One of three finalists selected from 40 applicants to present orally at the institute's annual meeting.
- First thesis in animal biology to win this award at this 121-year-old institution widely known for its solid biotechnological background.

#### Ph.D. Thesis Recommendation

2013

University of São Paulo, Brazil

 Thesis chosen by a faculty panel to represent the Department of Anatomy of the School of Veterinary Medicine and Animal Science in the CAPES Thesis Award 2013, which annually awards the best Ph.D. thesis in Brazil.

### **Teaching Experience**

#### Lecturer

### **Reproductive Biology of Squamata** course (taught annually)

2010-2022

Butantan Institute, Brazil

- Designed the course along with several collaborators.
- Designed and presented 1–2 theoretical and practical lectures per course edition to 20–50 undergraduate students.

#### **Evolutionary Trends in Squamate Reproduction** course

2019

University of São Paulo, Brazil (taught during the 22<sup>nd</sup> Week of Biology)

- Co-organized a team-designed and team-taught course on the evolution of reproduction of squamate reptiles.
- Designed and presented one lecture to ~100 undergraduate and graduate students.

#### **Guest Lecturer**

#### **Reproductive Biology of Snakes and Lizards** course (online)

2020

Saruê Courses, Brazil

 Prepared and presented one undergraduate-level lecture on invitation from the course coordinator.

#### Reproductive Biology of Squamata course

2019, 2021

São Paulo State University, Brazil

- Designed and presented one lecture per course in the Animal Biology Graduate Program (taught biennially).
- Applied and graded tests and assisted with student assessments.

#### Vertebrate Zoology course

University of Guarulhos, Brazil

• Designed and presented one undergraduate-level lecture on invitation from the course coordinator.

#### **Senior Tutor**

#### Reproduction, Development, and Disease course

2017

2019

Sydney Medical School, University of Sydney, Australia

• Tutored multiple groups of undergraduate students (7-10 per group) on the reproductive anatomy of vertebrates.

# **Supervisory and Mentoring Experience**

# Ph.D. Co-supervision

Co-supervised (with Dr. Selma Almeida-Santos) one Ph.D. student on a research project at the University of São Paulo on the evolution of the reproductive strategies of a lizard subfamily.

2017-2021

• Student: Serena Migliore

#### M.Sc. Co-supervision

Co-supervised (with Dr. Selma Almeida-Santos) two M.Sc. students on research projects at the University of Sao Paulo.

2015-2017

• Students: Serena Migliore, Patricia S. Marinho

#### **Graduate Trainee Supervision**

Supervised two Graduate Trainee students on research projects at the Butantan Institute.

2011-2015

• Students: Natalia Torello-Viera & Serena Migliore

#### **B.Sc. Supervision**

Supervised one B.Sc. student on a research project at Universidade Cidade de São Paulo

2018-2019

• Student: Camila Virmieiro

Supervised two B.Sc. students on a research project at São Camilo University 2011-2012

• Students: Nathalie Bellini & Aline Bellomo

#### **Academic & Professional Services**

#### **Meeting Organizer**

#### Seminars of the Laboratory of Ecology and Evolution

2011-2012

Butantan Institute, Brazil

• Invited and hosted a different external speaker weekly for an entire year.

#### Ph.D. Committee Member

Invited and served as an external committee member to assess the theses of **six Ph.D. students**.

- Lucas Siqueira (São Paulo State University), 2021.
- Erick Bassi (São Paulo State University), 2020.
- Rafaela Coeti (University of São Paulo), 2020.
- Luis Miguel Lobo (University of São Paulo), 2019.
- Karina Silva (University of São Paulo), 2019.
- Veronica Barros (São Paulo State University), 2016.

#### M.Sc. Committee Member

Invited and served as an external committee member to assess the dissertations of **three** M.Sc. students.

- Patrícia Marinho (University of São Paulo), 2017.
- Paulo Machado-Filho (São Paulo State University), 2015.
- Karina Silva (University of São Paulo), 2015.

#### Ph.D. Qualifying Exam Committee Member

Invited and served as an external committee member to assess the qualifying exams of **five Ph.D. students**.

- Antonio Silva (Federal University of Pernambuco, Brazil), 2021.
- Lucas Sigueira (São Paulo State University), 2020.
- Erick Bassi (São Paulo State University, Brazil), 2019.
- Veronica Barros (São Paulo State University), 2015.
- Cristian Gomes (São Paulo State University), 2015.

#### **Academic Author Services**

Founder & Editor 2017-Present

CommScience Solutions, Brazil

- Edited and proofread over 70 scientific papers in different areas.
- Designed and managed websites and social media for research labs.

### M.Sc. Qualifying Exam Committee Member

Invited and served as an external committee member to assess the qualifying exams of **two**M.Sc. students.

- Paulo Machado-Filho (São Paulo State University), 2014.
- Natália Torello-Viera (São Paulo State University, Brazil), 2013.

#### **Invited Journal Referee**

- Acta Zoologica
- Acta Zoologica Mexicana
- Animals
- Annals of the Brazilian Academy of Sciences
- BioEssays
- Biota Neotropica
- Herpetologia Brasileira
- Herpetological Journal
- Herpetological Review
- Journal of Morphology
- Journal of Natural History
- Phyllomedusa
- South American Journal of Herpetology
- Zoologischer Anzeiger

#### **Volunteering**

Fieldwork to collect three-toed skinks in New South Wales (Australia) for Mike Thompson and Camilla Whittington's projects on the evolution of viviparity (160h).

2016-2017

Fieldwork to collect Tussock cool skinks in New South Wales for Camilla Whittington and Mike Thompson's project on the evolution of viviparity (160h).	2016–2017
Fieldwork to monitor long-necked turtles in Adelaide (Australia) for Mike Thompson and James Van Dyke's project on the conservation of long-necked turtles (36h).	2016
Fieldwork to collect red-bellied black snakes in New South Wales (Australia) for Mike Thompson and James Van Dyke's project on the evolution of viviparity (48h).	2015–2017
Fieldwork to the Alcatrazes Archipelago and Queimada Grande Island (Brazil) to help with Karina Kasperoviczus's postdoctoral project on the ecology of island pitvipers (500h).	2012–2014

# Consultancy

Field Biologist Dec 2009

WLM Wildlife Management, Brazil

- Rescued and handled mammal, reptile, amphibian, and bird species during the construction of a hydroelectric powerplant (60h).
- Reintroduced and monitored animals in safe areas.

Current Memberships	
American Society of Ichthyologists and Herpetologists	2021-present
Australian Society of Herpetologists	2015-present
Squamate Reproduction Research Group (co-founder)	2010-Present

# **Presentations and Meetings**

Invited Seminars and Symposium Speaker	
What do South American water snakes teach us about the evolution of viviparity? 2 <sup>nd</sup> Symposium on Reproductive Biology of Squamate Reptiles (São Paulo, Brazil)	2019
Evolution of viviparity in squamate reptiles. Seminars of the Graduate Program in Ecology and Evolution, São Paulo Federal University (São Paulo,	2015

Brazil)

What selective pressures favor viviparity in Squamata? The case of the water snakes of the tribe Hydropsini. Seminars of the Laboratory of Ecology and Evolution (São Paulo, Brazil)	2013
The influence of incubation temperature on the embryonic development and hatchling phenotype in the false-coral snake. Seminars of the Laboratory of Ecology and Evolution. Butantan Institute (São Paulo, Brazil)	2012
Reconstructing the evolution of the reproductive modes of snakes from the Hydropsini tribe. Seminars of the Laboratory of Ecology and Evolution.  Butantan Institute (São Paulo, Brazil)	2011
Oviparity and viviparity in squamates: Evolution and reproductive strategies.  Symposium: Reproductive biology of Squamata. 9 <sup>th</sup> Latin American Congress of Herpetology (Curitiba, Brazil)	2011
Intrauterine egg retention and egg incubation in snakes: ecological and evolutionary implications. Seminars of the Laboratory of Herpetology.  Butantan Institute (São Paulo, Brazil)	2006
Oral Presentations	
Braz HB, Almeida-Santos SM, Murphy C, Thompson MB. Uterine and	2016
eggshell modifications associated with the evolution of viviparity in South American water snakes. 33 <sup>rd</sup> Meeting of the Australian and New Zealand Society for Comparative Physiology and Biochemistry (Richmond, Australia)	
American water snakes. 33 <sup>rd</sup> Meeting of the Australian and New Zealand	2016
American water snakes. 33 <sup>rd</sup> Meeting of the Australian and New Zealand Society for Comparative Physiology and Biochemistry (Richmond, Australia)  Braz HB, Scartozzoni RR, Almeida-Santos SM. Reproductive modes of the South American water snakes: A study system for the evolution of viviparity in squamate reptiles. Australian Society of Herpetologists Meeting	2016
American water snakes. 33 <sup>rd</sup> Meeting of the Australian and New Zealand Society for Comparative Physiology and Biochemistry (Richmond, Australia)  Braz HB, Scartozzoni RR, Almeida-Santos SM. Reproductive modes of the South American water snakes: A study system for the evolution of viviparity in squamate reptiles. Australian Society of Herpetologists Meeting (Grindelwald, Australia)  Braz HB, Almeida-Santos SM. Evolution of viviparity in the snakes of the tribe Hydropsini. 15 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São	
American water snakes. 33 <sup>rd</sup> Meeting of the Australian and New Zealand Society for Comparative Physiology and Biochemistry (Richmond, Australia)  Braz HB, Scartozzoni RR, Almeida-Santos SM. Reproductive modes of the South American water snakes: A study system for the evolution of viviparity in squamate reptiles. Australian Society of Herpetologists Meeting (Grindelwald, Australia)  Braz HB, Almeida-Santos SM. Evolution of viviparity in the snakes of the tribe Hydropsini. 15 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil)  Braz HB. Evolution of viviparity in water snakes (Hydropsini). 22 <sup>nd</sup> Symposium of the Graduate Program in Anatomy of Domestic and Wild Animals (São	2013

# **Poster Presentations**

<sup>\*</sup>Co-authored with my supervised or mentored students

Silva KMP, <b>Braz HB</b> , Kasperoviczus KN, Marques OAV, Almeida-Santos SM. Reproductive biology, sexual size dimorphism, and seasonal abundance of the pitviper <i>Bothrops jararacussu</i> . 9 <sup>th</sup> Brazilian Congress of Herpetology (Campinas, Brazil).	2019
*Virmieiro C, <b>Braz HB</b> . Reproduction of <i>Thamnodynastes strigatus</i> : an unusual reproductive phenology in a Neotropical snake. 21 <sup>st</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2019
*Migliore SN, <b>Braz HB</b> , Gasparotto VP, Dias R, Almeida-Santos SM. Reproduction and agonistic interactions in <i>Trachylepis atlantica</i> : an endemic lizard from the Fernando de Noronha Archipelago. 21 <sup>st</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2019
Silva KMP, <b>Braz HB</b> , Kasperoviczus KN, Marques OAV, Almeida-Santos SM. Reproductive biology of the pitviper <i>Bothrops jararacussu</i> . 19 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2017
*Migliore SN, Silva-Barros K, <b>Braz HB</b> , Almeida-Santos SM. Reproductive biology of the sympatric lizards <i>Enyalius perditus</i> and <i>E. iheringii</i> . 19 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2017
Kasperoviczus KN, <b>Braz HB</b> , Guedes TB. Sexual dimorphism, fecundity, and sperm storage in <i>Apostolepis gaboi</i> : a threatened fossorial snake from the Caatinga region. 19 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2017
*Migliore SN, <b>Braz HB</b> , Almeida-Santos SM. Reproductive and behavioral aspects of two sympatric lizards ( <i>Enyalius</i> ) of the Atlantic Forest. 15 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2013
Almeida-Santos SM, <b>Braz HB</b> , Rojas CA, *Bellini NS. Exploring new directions on the reproductive biology of colubrid snakes. 15 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2013
<b>Braz HB</b> , Almeida-Santos SM. Does the cold climate hypothesis explain the evolution of viviparity in water snakes of the tribe Hydropsini? 14 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2012
<b>Braz HB</b> , Almeida-Santos SM. Does the cold climate hypothesis explain the evolution of viviparity in Neotropical water snakes (Hydropsini)? 7 <sup>th</sup> World Congress of Herpetology (Vancouver, Canada).	2012
Kasperoviczus KN, <b>Braz HB</b> , Almeida-Santos SM. Life-history variation in island populations of the <i>Bothrops jararaca</i> complex. 7 <sup>th</sup> World Congress of Herpetology (Vancouver, Canada).	2012
*Torello-Viera NF, Araújo DP, <b>Braz HB</b> . Activity patterns and substrate use of the snail-eating snake, <i>Dipsas bucephala</i> . 7 <sup>th</sup> World Congress of Herpetology (Vancouver, Canada).	2012

<b>Braz HB</b> , *Bellini NS, Almeida-Santos SM. Patterns of selection and use of the nest site in Neotropical snakes. 13 <sup>rd</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2011
*Torello-Viera NF, Araújo DP, <b>Braz HB</b> . Daily activity and substrate use in <i>Dipsas bucephala</i> kept in captivity. 9 <sup>th</sup> Latin American Congress of Herpetology/5th Brazilian Congress of Herpetology (Curitiba, Brazil).	2011
Kasperoviczus KN, <b>Braz HB</b> , Almeida-Santos SM. Life-history variation in island populations of the 'jararaca group'. 9 <sup>th</sup> Latin American Congress of Herpetology/5th Brazilian Congress of Herpetology (Curitiba, Brazil).	2011
*Bellini NS, <b>Braz HB</b> , Almeida-Santos SM. Patterns of nest-site selection and use in Neotropical snakes. 9 <sup>th</sup> Latin American Congress of Herpetology/5th Brazilian Congress of Herpetology (Curitiba, Brazil).	2011
Kasperoviczus KN, <b>Braz HB</b> , Almeida-Santos SM. Diet and feeding frequency of a fossorial snake ( <i>Phalotris lativittatus</i> ). 12 <sup>nd</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2010
<b>Braz HB</b> , Oliveira L, Almeida-Santos SM. Twinning, triplets, and bicephaly in a clutch of the green snake ( <i>Philodryas olfersii</i> ). 12 <sup>nd</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2010
<b>Braz HB</b> , Almeida-Santos SM. Egg retention and the evolution of viviparity in tropical snakes. 11 <sup>st</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2009
<b>Braz HB</b> , Almeida-Santos SM. What factors influence the incubation time of snake eggs? Testing hypotheses on a tropical snake with labile egg retention. 11 <sup>st</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2009
Kasperoviczus KN, <b>Braz HB</b> , Almeida-Santos SM. Reproductive ecology of a fossorial snake ( <i>Phalotris lativittatus</i> ) from Brazilian Cerrado. 11 <sup>st</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2009
<b>Braz HB</b> , Almeida-Santos SM. Does the embryo stage at oviposition differ between snakes and lizards? A study of egg retention in tropical snakes. 6 <sup>th</sup> World Congress of Herpetology (Manaus, Brazil).	2008
<b>Braz HB</b> , Furtado MFD, Almeida-Santos SM. Phenotypic plasticity in the false-coral snake <i>Oxyrhopus guibei</i> in response to the thermal conditions during incubation. 3 <sup>rd</sup> Brazilian Congress of Herpetology (Belem, Brazil).	2007
Casagrande RA, <b>Braz HB</b> , Serapicos EO, Sá LRM. Ophthalmopathies in colubrid snakes hatched in captivity: the importance of anatomopathological characterization. 3 <sup>rd</sup> Brazilian Congress of Herpetology, (Belem, Brazil).	2007
<b>Braz HB</b> , Almeida-Santos SM, Furtado MFD. Effects of incubation temperature on developmental rates and morphological traits in hatchlings of <i>Oxyrhopus guibei</i> . 8 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2006

<b>Braz HB</b> , Parpinelli AC, Rocha MMT, Furtado MFD. Survival and mortality rates of three species of colubrid snakes kept in captivity for venom extraction. 8 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2006
<b>Braz HB</b> , Furtado MFD. Necrophagy in <i>Erythrolamprus aesculapii</i> as an alternative to captive feeding. 23 <sup>rd</sup> Brazilian Congress of Zoology (Londrina, Brazil).	2006
<b>Braz HB</b> , Rocha MMT, Furtado MFD. Thawed snakes as food for <i>Erythrolamprus aesculapii</i> in captivity. 7 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil).	2005
<b>Braz HB</b> , Bueno J, Costa G, Dias A, Ferraz G, Magri J, Nascimento B, Pimentel A, Rego RD, Ulivieri CH, Pires AO. Quantitative and qualitative survey of fecal and total coliforms in fisheries in the metropolitan region of São Paulo. 1st Experimental Biology Meeting (São Paulo, Brazil).	2005

# **Attendance at Meetings**

• 5 <sup>th</sup> School of Researchers of the campus USP São Carlos (Online)	2021
• 21st Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil)	2019
• 20 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil)	2018
• 19 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil)	2017
<ul> <li>33<sup>rd</sup> Meeting of the Australian and New Zealand Society for Comparative Physiology and Biochemistry (Richmond, Australia)</li> </ul>	2016
• Australian Society of Herpetologists Meeting (Grindelwald, Australia)	2016
• 16 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil)	2014
• 15 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil)	2013
• 7 <sup>th</sup> World Congress of Herpetology (Vancouver, Canada)	2012
<ul> <li>Challenges for the Conservation of Megadiversity: the case of amphibians and reptiles (São Paulo, Brazil)</li> </ul>	2012
• 14 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil)	2012
• 9 <sup>th</sup> Latin American Congress of Herpetology (Curitiba, Brazil)	2011
• 5 <sup>th</sup> Brazilian Congress of Herpetology (Curitiba, Brazil)	2011
<ul> <li>5<sup>th</sup> Forum Strategies for the Conservation of Reptiles and Amphibians (Curitiba, Brazil)</li> </ul>	2011
• 13 <sup>rd</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil)	2011
<ul> <li>22<sup>nd</sup> Symposium of the Graduate Program in Anatomy of Domestic and Wild Animals (São Paulo, Brazil)</li> </ul>	2010

<ul> <li>1st International Meeting of Teaching in Anatomy of the Biomedical Sciences Institutes of the University of São Paulo (São Paulo, Brazil)</li> </ul>	2010
<ul> <li>International Symposium on Phylogeography (São Paulo, Brazil)</li> </ul>	2010
• 12 <sup>nd</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil)	2010
<ul> <li>20<sup>th</sup> Symposium of the Graduate Program in Anatomy of Domestic and Wild Animals (São Paulo, Brazil)</li> </ul>	2010
<ul> <li>Meeting of Philosophy and History of Biology (São Paulo, Brazil)</li> </ul>	2009
<ul> <li>18<sup>th</sup> Symposium of the Graduate Program in Anatomy of Domestic and Wild Animals (São Paulo, Brazil)</li> </ul>	2009
• 6 <sup>th</sup> World Congress of Herpetology (Manaus, Brazil)	2008
• 9th Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil)	2007
<ul> <li>New Directions in Snake Biology (São Paulo, Brazil)</li> </ul>	2006
• 8 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil)	2006
• 26 <sup>th</sup> Brazilian Congress of Zoology (Londrina, Brazil)	2006
<ul> <li>1<sup>st</sup> Experimental Biology Meeting (São Paulo, Brazil)</li> </ul>	2005
• 7 <sup>th</sup> Annual Scientific Meeting of the Butantan Institute (São Paulo, Brazil)	2005

# **Impact Outside Academia**

#### **Public Lectures**

2008
2007
2007
2006

# Popular Media

Buehler J. This frog's babies erupt out of its back—and other surprising ways animals give birth. National Geographic website.

2020

Goeldi Museum Agency. <u>A study reveals the rich diversity of snakes in the</u> Americas.	2018
Amonogo.	
Lisboa C. A study on tropical snakes reveals high diversity in the Cerrado.	2017
((o))eco.	
Later to the later and the three Headers Ordered of Biological Ordered The	0015
Interview about my work with the eUpdate. School of Biological Sciences, The	2015
University of Sydney.	

#### Skills

#### Languages

- English (Fluent)
- Portuguese (Native)
- Spanish (Intermediate)

#### **Data Analysis and Management**

- Phylogenetic comparative methods
- Statistical analysis
- Collection, compilation, and management of complex and extensive databases
- Geographic information system (GIS)

#### **Computer Software/Programming**

- R and RStudio
- Mesquite, BayesTraits
- ArcGIS and DIVA-GIS
- Statistica
- Reference Managers (Mendeley, Zotero, EndNote)
- Website design and management (WordPress)
- Microsoft Office and Google Suite

#### **Laboratory Skills/Techniques**

- Fixation and preservation of specimens
- Dissection and tissue collection of vertebrate specimens
- Microscopy (histology, histochemistry, and electron microscopy)
- Interpretation of histological slides

- In vivo trials
- General wet lab duties

# Writing

- Copyediting and proofreading scientific articles
- Grant writing
- Preparation of research budgets

#### **Captive Animal Husbandry**

 Handling/management of experimental colonies of snakes, lizards, rodents, and invertebrates

# Management

- Organization and execution of fieldwork expeditions, including remote sites such as islands
- Management of research budgets

Training and Professional Development	
For editors: Criteria for indexing journals in the Scopus database University of São Paulo, Brazil (online, 2h)	2021
Mendeley - Manage your research references with excellence University of São Paulo, Brazil (online, 2h)	2021
How to promote your article for maximum impact Elsevier Publishing Campus (online, 1h)	2016
Discover how metrics can boost funding and networking opportunities Elsevier Publishing Campus (online, 1h)	2016
Why you can't afford to ignore research and publication ethics Elsevier Publishing Campus (online, 1h)	2016
How to identify the right journal to publish in Elsevier Publishing Campus (online, 1h)	2016
First aid, cardiopulmonary resuscitation, and emergency life support Allens Training Pty Ltd, Australia (7h)	2016
Fundamentals of animal research The University of Sydney, Australia (3.5h)	2015

Work health and safety induction The University of Sydney, Australia	2015
Logical method for scientific writing Butantan Institute, Brazil (16h)	2013
Article structure for international publication University of São Paulo, Brazil (7h)	2010
EndNote and EndNote Web University of São Paulo, Brazil (2h)	2009
Let's talk about evolution Butantan Institute, Brazil (4h)	2009
Introduction to radio telemetry in snakes Butantan Institute, Brazil (6h)	2008
Evolutionary biology of snakes Brazilian Society of Herpetology, Brazil (12h)	2006
Snakes Butantan Institute, Brazil (40h)	2006
Amphibians: biology, taxonomy, and venoms Butantan Institute, Brazil (15h)	2005
Bites by venomous animals Butantan Institute, Brazil (75h)	2005
Scientific initiation Butantan Institute, Brazil (20h)	2005
Scientific writing Butantan Institute, Brazil (9h)	2005
Reptile husbandry Bioterium, Brazil (6h)	2005
Coastal fish: biodiversity and conservation Nove de Julho University, Brazil (6h)	2005