

## Claudineia Pereira Costa

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### Professional Appointments

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#### Postdoctoral Fellow (2018-currently).

University of California, Riverside, USA.  
Supervisor: Sarah Hollis Woodard, Ph.D.

#### Laboratory Assistant (2018).

University of São Paulo, USP, Ribeirão Preto, Brazil.  
Supervisor: Fernando Luis Medina Mantellato, Ph.D.

### Education

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#### Ph.D. in Genetics (2012-2017).

University of São Paulo, USP, Ribeirão Preto, Brazil.  
Thesis: Population dynamics of orchid bees (Apidae, Euglossini) in different phytophysiognomies of the State of São Paulo.  
Advisor: Tiago Mauricio Franco, Ph.D.

#### M.Sc. in Entomology (2010-2012).

University of São Paulo, USP, Ribeirão Preto, Brazil.  
Dissertation: Bursicon and its role in the context of metamorphosis in *Apis mellifera*.  
Advisor: Márcia Maria Gentile Bitondi, Ph.D.

#### B.Sc. in Biological Sciences (2006-2011).

University of São Paulo, USP, Ribeirão Preto, Brazil.  
Monography: Characterization of genes encoding Bursicon and their role in the regulation of exoskeleton differentiation in the honey bee, *Apis mellifera* (Hymenoptera, Apinae).  
Advisor: Márcia Maria Gentile Bitondi, Ph.D.

#### Teaching Credentials in Biology (2006-2010).

University of São Paulo, USP, Ribeirão Preto, Brazil.

### Peer Reviewed Publications

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9. Costa CP, Machado CAS, Franco TM. Assessment of genetic diversity and population structure of *Eulaema nigrita* (Euglossini, Hymenoptera, Apidae) as a factor of habitat type in Brazilian Atlantic Forest fragments. *The Canadian Entomologist* (Accepted).
8. Costa CP, Fisher K, Guillén BM<sup>+</sup>, Bloch G, Yamanaka N, Woodard SH. Care-giver identity impacts offspring development and performance in an annually social bumble bee. *BMC Ecology and Evolution* (In press). <sup>+</sup>Indicates Undergraduate Author
7. Agostini JC, Costa CP, Ferreira JT, Dias AC, Guerra NP, Simões ZLP, Lourenço AP. Vitellogenin of the solitary bees *Centris tarsata* and *Centris analis* (Hymenoptera: Apidae): cDNA structural analysis and gene expression. *Apidologie* (In press).
6. Costa CP, Machado CAS, Santiago WMS, Dallacqua RP, Garofalo CA, Franco TM. 2020. Biome variation, not distance between populations, explains morphological variability in the orchid bee *Eulaema nigrita* (Hymenoptera, Apidae, Euglossini). *Apidologie* 51: 984-996.
5. Costa CP, Duennes M, Fisher K, Der JP, Watrous KM, Yamanaka N, Okamoto N, Woodard SH. 2020. Transcriptome analysis reveals nutrition- and age-related patterns of gene expression in the fat body of pre-overwintering bumble bee queens. *Molecular Ecology* 29(4): 720-737.

4. Machado CAS\*, Costa CP\*, Francoy TM. 2018. Different physiognomies and their relationship with the structure of Euglossini bee (Hymenoptera: Apidae) communities. *Sociobiology* 65(3): 471-481. \*co-first author
3. Moretti CJ<sup>+</sup>, Costa CP, Francoy TM. 2018. Wing morphometrics reveals the migration patterns of Africanized honey bees in Northeast Brazil. *Sociobiology* 65(4): 679-685. <sup>+</sup>Indicates Master' student Author
2. Costa CP, Francoy TM 2017. The impact of different phytophysiognomies on the composition of Orchid Bee communities (Hymenoptera: Apidae: Euglossini) in the Atlantic Forest in Brazil. *Annals of the Entomological Society of America* 110(3): 255-262.
1. Costa CP, Elias-Neto M, Falcon T, Dallacqua RP, Martins JR, Bitondi MMG. 2016. RNAi-mediated functional analysis of Bursicon genes related to adult cuticle formation and tanning in the Honeybee, *Apis mellifera*. *Plos One* 11 (e0167421).

### Manuscript submitted and pre-prints

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Watrous KM, Costa CP, Diaz YR<sup>+</sup>, Woodard SH. Flexibility in the critical period of nutrient sequestration in bumble bee queens. (In revision). <sup>+</sup>Indicates Undergraduate Author

### Grants and Fellowship

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2018	CNPq – Technician fellowship – Laboratory Assistant (~US\$500, full salary for five months)
2016	FAPESP – BEPE Ph.D. Fellowship Abroad (~US\$8,000, full tuition and salary for four months to be a visiting scholar at York University, CA)
2013-2017	FAPESP – Regular Ph.D. Fellowship (~US\$36,000, full salary for three years; and an additional ~US\$5,000 for research-related and program travel expenses)
2013	CAPES – Regular Ph.D. Fellowship (~US\$12,000, full salary for one year)
2012	PRO-REITORIA/USP/PAE – Teaching Improvement Program – Fellowship for graduate students (~US\$500, full salary for six months)
2010-2012	CNPQ – Regular M.Sc. Fellowship (~US\$10,000, full salary for two years)
2010	FAPESP – Regular Fellowship for undergraduate students (~US\$1,600, full salary for one year)
2008-2010	CNPQ/ USP – PIBIC Fellowship for undergraduate students (~US\$1,600, full salary for two year).

### Teaching experience

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2013	<b>Teaching Assistant.</b> Genetic II. Department of Biology. University of São Paulo, USP, Ribeirão Preto, Brazil. Supervisor: Dr. Tiago Campos Pereira.
2012	<b>Teaching Assistant.</b> Embryology and Morphogenesis. Department of Biology. University of São Paulo, USP, Ribeirão Preto, Brazil. Supervisor: Dr. Márcia Maria Gentile Bitondi.
2009	<b>Instructor.</b> Embryology and Morphogenesis. Department of Biology. University of São Paulo, USP, Ribeirão Preto, Brazil. Supervisor: Dr. Márcia Maria Gentile Bitondi.
2007	<b>Instructor.</b> Cell biology. Department of Biology. University of São Paulo, USP, Ribeirão Preto, Brazil. Supervisor: Dr. Maria de Lourdes Teixeira de Moraes Polizeli.

### Professional development

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2019	2019 IGTRCN Technical Short Course on Insect Genetic Technologies: Theory and Practice. The Insect Transformation Facility, University of Maryland College Park, Rockville, USA (Workload: 40h).
2018	Test statistic: A dynamic approach. AAPS University of Sao Paulo Student Chapter. University of São Paulo, USP, Ribeirão Preto, Brazil (Workload: 08h).

- 2018** XVI Course of Bioinformatics – Identification, annotation and expression analysis of transcripts using RNA-Seq. University of Campinas – UNICAMP, Campinas, Brazil, LACTAD (Workload: 30h).
- 2017** Introduction Course to the Use of Software R and its applications Statistics in Conservation Biology. Escola Superior de Conservação Ambiental e Sustentabilidade, ESCAS, Brazil (Workload: 80h).
- 2016** Course of R applied for Bioinformatics – Introduction. CRABI – RP, Ribeirão Preto, Brazil (Workload: 14h).
- 2016** Introduction Course in Python applied to Bioinformatics. University of São Paulo, USP, Ribeirão Preto, Brazil (Workload: 13h).
- 2015** Course in Bioinformatics Tripartite. University of São Paulo, USP, Ribeirão Preto, Brazil (Workload: 80h).
- 2015** 1<sup>st</sup>Course in Biostatistics. AAPS University of Sao Paulo Student Chapter. University of São Paulo, USP, Ribeirão Preto, Brazil (Workload: 40h).
- 2014** Programming for Evolutionary Biology. Universidad Nacional de Colombia - Bogotá, UNAL/Bogotá, Bogotá, Colombia (Workload: 128h).

### Academic service

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- 2015** Organized workshop. V Workshop do Programa de Pós-Graduação em Genética, University of São Paulo, Ribeirão Preto, SP, Brazil.
- 2015** Organized conference. XI Encontro sobre Abelhas, Ribeirão Preto, SP, Brazil.
- 2014** Organized summer course. XIX Curso de Verão em Genética, Department of Genetics, University of São Paulo, Ribeirão Preto, SP, Brazil.
- 2012** Organized summer course. X Curso de Verão em Entomologia, Department of Entomology, University of São Paulo, Ribeirão Preto, SP, Brazil.
- 2010** Organized conference. IX Encontro sobre Abelhas, Ribeirão Preto, SP, Brazil.

**Peer-reviews for scientific journals:** Journal of Thermal Biology; Journal of Apicultural Research; Apidologie; Ecology; Neotropical.

**Mentoring:** Undergraduate mentor (2); Master degree co-adviser (2).

**Advancing accessibility and inclusivity in science:** Broad member of the Associate for Women in Science - AWIS UC Riverside (2020 -). Member of the Inclusivity Committee for the Department of Entomology at UCR (2020 -).

### Selected oral presentations

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- 2019** **Contributed talk.** Comparative transcriptomics reveals nutritional and maturational signatures in the fat body in pre-overwintering bumblebee (*Bombus impatiens*) queens. Entomology (ESA) 2019 Annual Meeting, Saint Louis, USA.
- 2016** **Contributed talk.** Altitudinal and geographical effects on communities of euglossine bees (Hymenoptera: Apidae) in three different phytogeographies of the Atlantic Forest of São Paulo State, Brazil. XXV International Congress of Entomology (ICE 2016), Orlando, USA.
- 2009** **Contributed talk.** O neuro-hormônio Bursicona e seu papel na diferenciação do tegumento de *Apis mellifera*. XXIII Congresso Brasileiro de Entomologia, Natal, Brazil.

## Extension and Outreach

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- 2020** **Invited talk.** Different phytophysiognomies and the population dynamics of orchid bees (Apidae, Euglossini). Essig Museum of Entomology seminar series, Berkeley, California
- 2019** **Invited talk.** The regulation of size and its role in caste differentiation in Bumblebees. Postdoc hour. Riverside Postdoctoral Association (RPA).
- 2018** **Invited talk.** Morfometria geométrica. Discipline: Insetos Sociais. Department of Entomology, University of São Paulo, Ribeirão Preto, SP, Brazil.
- 2014** **Invited talk.** Ferramentas de identificação fenotípica aplicada a genética de populações. XIX Curso de Verão em Genética, Department of Genetics, University of São Paulo, Ribeirão Preto, SP, Brazil.
- 2012** **Invited talk.** Diferenciação do exoesqueleto em abelhas eusociais. X Curso de Verão em Entomologia, Department of Entomology, University of São Paulo, Ribeirão Preto, SP, Brazil.
- 2012** **Invited talk.** Biologia e Desenvolvimento em Abelhas. X Curso de Verão em Entomologia, Department of Entomology, University of São Paulo, Ribeirão Preto, SP, Brazil.
- 2012** **Invited talk.** Biologia do Desenvolvimento de Abelhas – maturação cuticular. XVII Curso de Verão em Genética, Department of Genetics, University of São Paulo, Ribeirão Preto, SP, Brazil.
- 2011** **Invited talk.** Técnicas de imuno-citoquímico e hibridação “In situ” como ferramenta para estudos de expressão gênica no desenvolvimento de fêmeas *Apis mellifera*. XVI Curso de Verão em Genética, Department of Genetics, University of São Paulo, Ribeirão Preto, SP, Brazil.
- 2010** **Instructor.** VIII Curso de Verão em Entomologia, Department of Entomology, University of São Paulo, Ribeirão Preto, SP, Brazil.
- 2009** **Instructor.** VII Curso de Verão em Entomologia, Department of Entomology, University of São Paulo, Ribeirão Preto, SP, Brazil.
- 2009** **Instructor.** XIV Curso de Verão em Genética, Department of Genetics, University of São Paulo, Ribeirão Preto, SP, Brazil.

## Professional society affiliations

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International Union for the Study of Social Insects, North American Section (IUSSI-NAS); Animal Behavior Society (ABS).

## Bioinformatics Skills

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**Daily:** R, Inkscape; **Often:** Python, Unix Environment; **Seldom:** Perl.

## Language skills

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Portuguese (native); English (fluent).