

# Ana Caroline Colombo

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## PROFESSIONAL EXPERIENCE

- 02/2021–present     **English Teacher**  
*Online Private Lessons for Brazilians.*
- Designed and planned lessons based on students needs
  - Developed exercises taking into account challenges that Portuguese speakers have in learning English
  - Highlighted cultural characteristics of different countries, such as the USA and the UK.
- 06/2019–08/2019     **Arboretum Intern**  
*Lyon Arboretum - Honolulu, HI, USA.*
- Developed a field-trip material for 3rd grade about plant adaptations
  - Helped with k-12 summer camp
  - Guided tours through the arboretum
  - Participated in outreach at public events
  - Learned and assisted with: a) plant propagation techniques in the Greenhouse and the Micropropagation Lab as a conservation project/effort, b) identification of plants, c) maintenance of gardens and trails.
- 03/2019–06/2019     **Provider Credentialing Assistant**  
*HMAA/HWMG - Honolulu, HI, USA.*
- Reached out to providers for credentialing in the health insurance company system
  - Organized data and files.
- 08/2016–12/2017     **Research Support Specialist**  
*Stony Brook University, Stony Brook, NY, USA.*
- Managed projects independently
  - Established external collaborations
  - Processed and analyzed data
  - Authored two published scientific papers
  - Presented in conferences
  - Conducted research in biomedical topics and performed laboratory experiments.

## EDUCATION

- 2018     **PhD in Biological Chemistry**, Federal University of Rio de Janeiro (UFRJ), Brazil.
- 2014     **MSc in Psychobiology**, University of São Paulo (USP), Brazil.
- 2011     **BSc in Biology**, State University of São Paulo (UNESP), Brazil.
- 2010     **Licentiate degree in Biology**, State University of São Paulo (UNESP), Brazil.  
*Undergraduate level degree for teaching in primary and secondary education.*

## CONTINUING EDUCATION

- 2021 (60h)     **Wanderlust Child: Nature Study**  
Online - Hygge in the Early Years, UK.
- 2021 (1h)     **How to ... support schools with plant biology webinar**  
Online - STEM Ambassador, UK.
- 2020     **Inspiring Young People in STEM: Communication Skills for STEM Ambassadors**  
Online - Future Learn, UK.
- 2019 (1 month)     **101 Web Development**  
DevLeague - Honolulu, HI, USA.

2019 (1h)	<b>Programming Foundations: Software Testing/QA</b> Online - LinkedIn Learning.
2019 (1h30)	<b>Learning Design for Sustainability</b> Online - LinkedIn Learning.
2019 (2h10)	<b>The Top 10 Project Management Mistakes—and How to Avoid Them</b> Online - LinkedIn Learning.
2019 (1h55)	<b>Comparing Agile versus Waterfall Project Management</b> Online - LinkedIn Learning.
2018 (24h)	<b>Starting a Nonprofit</b> Online - Gale Courses, USA.

## TEACHING INTERNSHIPS

10/2018–03/2019	<b>Assistant Teacher</b> – Botany for kindergarten to 4th Grade <i>Education Department at Lyon Arboretum, Honolulu, USA.</i> • Assisted and taught field trips and indoor classes • Organized and managed the classrooms.
2015 (10 classes)	<b>Assistant Teacher</b> – Undergraduate Biochemistry <i>Federal University of Rio de Janeiro, Brazil.</i> • Developed guided practice worksheets • Created and implemented formative assessment • Prepared and presented theoretical classes • Designed and applied final exams.
2015 (10 classes)	<b>Group Supervisor</b> – Graduate Immune-neuro-endocrine System <i>Federal University of Rio de Janeiro, Brazil.</i> • Guided and helped a group of seven students to prepare and teach theoretical and creative classes.
03/2010–12/2010	<b>Assistant Teacher</b> – Biology for High School students <i>State School Professor Francisco Guedelha, Botucatu, Brazil.</i> • Helped to develop and organize the first science fair of the school • Taught theoretical and practical biology classes • Participated in group meetings • Helped to design and apply surveys to assess student's goals.
2007 (9 classes)	<b>Volunteer Teacher</b> – Literature for a pre-university preparatory course <i>State University of São Paulo, Brazil.</i> • Prepared and taught classes.

## VOLUNTEERING AND OUTREACH

2020–present	<b>Demonstrator Of Really Entertaining Education,</b> <i>Aquarium of the World Museum, Liverpool, UK.</i> • Interacted with public and demonstrated rock pool live animals and preserved specimens • Oversaw animal welfare • Logged visitor figures.
2020–present	<b>STEM Ambassador,</b> <i>All about STEM, Liverpool, UK.</i> • Engaged with online communication about career in science • Participated in online training.
2020–present	<b>Specimens Transcriber,</b> <i>Kew Gardens, DigiVol (Online).</i> • Helped to digitise information of the Herbarium and Fungarium collections.

- 2020 **Invited speaker (Online),**  
*Public School EMEF Prof. José Toledo de Mendonça, Brazil.*  
 • Presented and discussed about career and cultural experiences in an online session for students of primary and secondary education • Motivated students and teachers with a different online approach.
- 10/2018–03/2019 **Assistant for Children’s Education Program,**  
*Lyon Arboretum, Honolulu, USA.*  
 • Taught hour long, primary education level classes • Assisted students with difficult tasks  
 • Prepared classroom resources.
- 08/2018–03/2019 **Gift Shop Clerk,**  
*Lyon Arboretum, Honolulu, USA.*  
 • Greeted and helped visitors with general information • Operated the cash register • Organized the store.
- 2018 **Retail Helper for Goodwill Goes Glam event,**  
*Goodwill, Honolulu, USA.*  
 • Helped customers and organized products.
- 2017 **Invited speaker,**  
*Nassakeag Elementary School, Setauket, USA.*  
 • Created and presented a class about Brazil.
- 2009 **Research Interviewer,**  
*State University of São Paulo, Brazil.*  
 • Collected patient information • Explained research goals and consent form • Established contact between clinic and research group.

## PLANNING AND COORDINATION

- 2020–present **Book club organiser,**  
*LadyMums Book Club, Liverpool, UK.*  
 • Gathered and interacted with some Mums (and babies) in Liverpool to change experiences, and discuss topics not related to motherhood • Managed to maintain the book club during the pandemic through online meetings.
- 2020 **Reunion - 10 years of Graduation,**  
*Online meeting.*  
 • Reached out to friends from University • Set up surveys and planned the meeting considering at least 5 time zones • Coordinated the online meeting.
- 04/2007–12/2010 **Accountant,**  
*Graduation Party Planning Committee, Brazil.*  
 • Surpassed the fundraising goal • Trusted for the position by peers • Helped to organize fundraising events • Designed and sold products • Participated in regular meetings and committee’s decisions.

## RESEARCH EXPERIENCE

- 2010–2016      **Neuroscience, Behavior and Pharmacology**
- Small animals models (mouse, rat and fish) • Behavioral tests to assess fear, anxiety, memory, and/or depression, such as: catalepsy, open field and contextual fear conditioning, ultrasonic vocalization recording, elevated plus-maze and fear potentiated startle, novel object recognition, tail suspension • Local and systemic drug injection • Stereotaxic surgery • Perfusion • Histology and tissue staining.
- 2014–2018      **Microbiology, Biochemistry and Immunology**
- Primary culture of rat astrocytes and neurons • Cell line culture • Hybridoma culture • Immunocytochemistry and Immunohistochemistry • Cultivation of pathogen yeast • Media preparation • Urease and melanin assay • Fungi growth and pH tests • Polysaccharide isolation and quantification • Vesicle purification and quantification • Lipid extraction and quantification • Animal model (mouse, *Galleria mellonella*) • Intranasal infection • Gavage technique • Systemic drug injection • Dissection • Histology and tissue staining • Dot blot • MTT assay • Antibody biotinylation • Enzyme-linked immunosorbent assay (ELISA) and Dubois colorimetric assay • Scanning Electron Microscopy (SEM) • Thin-layer chromatography (TLC) • Western blot • Southern blot • Flow cytometry • DNA purification • Biobalistic DNA delivery method.

## SCHOLARSHIPS

- 2014–2018      National Council for Scientific and Technological Development (CNPq), Brazil. **PhD Research Scholarship.**
- 2012–2014      São Paulo Research Foundation (FAPESP), Brazil. **Masters Research Scholarship.**
- 2012      National Council for Scientific and Technological Development (CNPq), Brazil. **Masters Research Scholarship.** (3 months)
- 2010      Coordination for the Improvement of Higher Education Personnel (CAPES), Brazil. **Undergraduate Institutional Program of Teaching Initiation Scholarship.** (9 months)
- 2009      State University of São Paulo (UNESP, Botucatu), Brazil. **Undergraduate Academic Support and Outreach Scholarship.** (6 months)

## PUBLICATIONS

- 2019      **Colombo, AC**, Rella, A, Normile, T, Joffe, LS, Tavares, PM, Araújo, GRS, Frases, S, Orner, EP, Farnoud, AM, Fries, BC, Sheridan, B, Nimrichter, L, Rodrigues, ML, Del Poeta, M. *Cryptococcus neoformans* glucuronoxylomannan and sterylglucoside are required for host protection in an animal vaccination model. *mBio*, doi:[10.1128/mBio.02909-18](https://doi.org/10.1128/mBio.02909-18).
- 2019      Barroca, NCB, Guarda, MD, Silva, NT, **Colombo, AC**, Reimer, AE, Brandão, ML, De Oliveira, AR. Influence of aversive stimulation on haloperidol-induced catalepsy in rats. Accepted at *Behavioural Pharmacology*. doi:[10.1097/FBP.0000000000000462](https://doi.org/10.1097/FBP.0000000000000462).
- 2018      Rizzo, J, **Colombo, AC**, Zamith-Miranda, D, Silva, VKA, Allegood, JC, Casadevall, A, Del Poeta, M, Nosanchuk, JD, Kronstad, JW, Rodrigues, ML. The putative flippase Apt1 is required for intracellular membrane architecture and biosynthesis of polysaccharide and lipids in *Cryptococcus neoformans*. *BBA - Molecular Cell Research*, doi:[10.1016/j.bbamcr.2017.12.007](https://doi.org/10.1016/j.bbamcr.2017.12.007).
- 2015      Brandão, ML, De Oliveira, AR, Muthuraju, S, **Colombo, AC**, Saito, VM, Talbot, T. Dual role of dopamine D2-like receptors in the mediation of conditioned and unconditioned fear. *FEBS Letters*, doi:[10.1016/j.febslet.2015.02.036](https://doi.org/10.1016/j.febslet.2015.02.036).

- Colombo, AC**, Rodrigues, ML. Fungal colonization of the brain: anatomopathological aspects of neurological cryptococcosis. *Annals of the Brazilian Academy of Sciences*, doi:[10.1590/0001-3765201520140704](https://doi.org/10.1590/0001-3765201520140704).
- 2014 De Oliveira, AR, **Colombo, AC**, Muthuraju, S, Almada, RC, Brandão, ML. Dopamine D2-like receptors modulate unconditioned fear: Role of the inferior colliculus. *Plos One*, doi:[10.1371/journal.pone.0104228](https://doi.org/10.1371/journal.pone.0104228).
- 2013 **Colombo, AC**, De Oliveira, AR, Reimer, AE, Brandão, ML. Dopaminergic mechanisms underlying catalepsy, fear and anxiety: Do they interact?. *Behavioural Brain Research*, doi:[10.1016/j.bbr.2013.10.002](https://doi.org/10.1016/j.bbr.2013.10.002).

## ACADEMIC SERVICE & AFFILIATIONS

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|-----------|---|
| 2018–2020 | Ad hoc referee of undergraduate scientific projects<br>Psychology<br>Federal University of São Carlos, Brazil.      |
| 2015      | Ad hoc referee of undergraduate scientific posters<br>Microbiology<br>Federal University of Rio de Janeiro, Brazil. |
| 2009      | Organizing committee of the XIII Biology Week<br>State University of São Paulo, Brazil.                             |

## ADDITIONAL INFORMATION

• Bilingual (English and Portuguese) • Microsoft Office • Basic Python and Jupyter Notebook • JavaScript, HTML, CSS and  $\text{\LaTeX}$  • GitHub • Basic Image Editing and Vector Graphics Software • Data Processing and Statistical Analysis