

# Ana Caroline Colombo

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Last updated: April, 2021

## 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)     **Programming Foundations: Software Testing/QA** – Online - LinkedIn Learning.
- 2019 (1h30)     **Learning Design for Sustainability** – Online - LinkedIn Learning.

- 2019 (2h10) **The Top 10 Project Management Mistakes—and How to Avoid Them** – Online - LinkedIn Learning.
- 2019 (1h55) **Comparing Agile versus Waterfall Project Management** – Online - LinkedIn Learning.
- 2018 (24h) **Starting a Nonprofit** – Online - Gale Courses, USA.

## TEACHING INTERNSHIPS

- 10/2018–03/2019 **Assistant Teacher** – Botany for kindergarten to 4th Grade  
*Education Department at Lyon Arboretum, Honolulu, USA.*  
• Assisted and taught field trips and classes • Organized and managed the classrooms.
- 2015 (10 classes) **Assistant Teacher** – Undergraduate Biochemistry  
*Federal University of Rio de Janeiro, Brazil.*  
• Developed guided practice worksheets • Created and implemented formative assessment  
• Prepared and presented theoretical classes • Designed and applied final exams.
- 2015 (10 classes) **Group Supervisor** – Graduate Immune-neuro-endocrine System  
*Federal University of Rio de Janeiro, Brazil.*  
• Guided and helped a group of seven students to prepare and teach theoretical and creative classes.
- 03/2010–12/2010 **Assistant Teacher** – Biology for High School students  
*State School Professor Francisco Guedelha, Botucatu, Brazil.*  
• 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) **Volunteer Teacher** – Literature for a pre-university preparatory course  
*State University of São Paulo, Brazil.*  
• Prepared and taught classes.

## VOLUNTEERING AND OUTREACH

- 2020–present **Demonstrator Of Really Entertaining Education,**  
*Aquarium of the World Museum, Liverpool, UK.*  
• Interacted with public and demonstrated rock pool live animals and preserved specimens  
• Oversaw animal welfare • Logged visitor figures.
- 2020–present **STEM Ambassador,**  
*All about STEM, Liverpool, UK.*  
• Engaged with online communication about career in science • Participated in online training.
- 2020–present **Specimens Transcriber,**  
*Kew Gardens, DigiVol (Online).*  
• 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.*
- Duties included customer service and organizing sales inventory.
- 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 intercatated 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

• Animal model (mouse, *Galleria mellonella*) • Intranasal infection • Gavage technique • Systemic drug injection • Dissection • CFU • Histology and tissue staining • Primary culture of rat astrocytes and neurons • Cell line culture • Hybridoma culture • Immunocytochemistry and Immunohistochemistry • Dot blot • MTT assay • Antibody biotinylation • Cultivation of pathogen yeast • Media preparation • Urease and melanin assay • Fungi growth and pH tests • Polysaccharide isolation and quantification • Vesicle purification and quantification • Enzyme-linked immunosorbent assay (ELISA) and Dubois colorimetric assay • Scanning Electron Microscopy (SEM) • Thin-layer chromatography (TLC) • Western blot • Southern blot • Flow cytometry • Lipid extraction and quantification • 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

2020 Ad hoc referee of undergraduate scientific projects  
Psychology  
Federal University of São Carlos, Brazil.

2019 Ad hoc referee of undergraduate scientific projects  
Psychology  
Federal University of São Carlos, Brazil.

2018 Ad hoc referee of undergraduate scientific projects  
Psychology  
Federal University of São Carlos, Brazil.

2015 Ad hoc referee of undergraduate scientific posters  
Microbiology  
Federal University of Rio de Janeiro, Brazil.

2009 Organizing committee of the XIII Biology Week  
State University of São Paulo, Brazil.

## ADDITIONAL INFORMATION

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