

# 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/HWMMG - 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.*

## RESEARCH EXPERIENCE

- 2010–2016     **Neuroscience, Behavior and Pharmacology**
- Small animals models (mouse, rat and fish)
  - Behavioral tests (fear and anxiety, memory and 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

• Mouse model • Intranasal infection • Gavage technique • Systemic drug injection • Dissection • CFU • Histology and tissue staining • *Galleria mellonella* infection model • 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.

## AWARDS

- 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).

## 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 **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.

## 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.

## CONTINUING EDUCATION

- 2021 (60h)    **Wanderlust Child: Nature Study** – Online - Hygge in the Early Years, UK. .
- 2019 (1 month)    **101 Web Development** – DevLeague - Honolulu, HI, USA.

## PLANNING AND COORDINATION

- 2020    **Book club organiser,**  
*LadyMums Book Club, Liverpool, UK.*  
 • Gathered and intercatd 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.

## ADDITIONAL SKILLS

- Bilingual (English and Portuguese) • Fundraising and Event Organization • Microsoft Office • Basic Python, JavaScript, HTML, CSS and L<sup>A</sup>T<sub>E</sub>X • Basic Image Editing and Vector Graphics Software • Data Processing and Statistical Analysis