

Ana Caroline Colombo

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PROFESSIONAL EXPERIENCE

06/2019–08/2019 **Arboretum Intern OR Education Department Intern**

Lyon Arboretum - Honolulu, HI, USA.

Hybrid experience with part-time spent in the Education Department, and part-time spent across three other Departments: Grounds, Horticulture and Micropropagation and Seed Labs.

- Developed a field-trip material for 3rd grade about plant adaptations
- Learned about Hawaiian culture
- Helped with k-12 summer camp
- Guided tours through the arboretum
- Participated in outreach at public events
- Learned and Assisted with plant propagation techniques, identification of plants and 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.

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 **Presenter of an online career experience session**,
Escola, Brazil.
• Engaged with career xxx • Participated training.
- 10/2018–03/2019 **Assistant for Children's Education Program**,
Lyon Arboretum, Honolulu, USA.
• Taught hour long, elementary 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.
- 04/2007–12/2010 **Accountant,**
 newline
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.

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

2019 (1 month) **101 Web Development** – DevLeague - Honolulu, HI, USA.

ADDITIONAL SKILLS

• Bilingual (English and Portuguese) • Fundraising and Event Organization • Microsoft Office • Basic Python, JavaScript, HTML, CSS and \LaTeX • Basic Image Editing and Vector Graphics Software • Data Processing and Statistical Analysis