



Sunland, CA

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Yuka McGrath

Bio

Yuka McGrath is a final year Biology major at **Loyola Marymount University**, Los Angeles. She is currently taking a sabbatical to gain work experience in industry with the goal of rounding out her industry knowledge and offering potential employers a well grounded and mature employee.

Yuka is currently working for **Zap Ink Studios** in an effort to field solutions regarding the Covid-19 Coronavirus epidemic. She has contributed at Zap Ink studios to the research and design of a mobile lab for both walk-in or drive through testing, capable of handling up to 3,456 individuals in a single day.

Her interest in science led her to intern for two consecutive summers at the **California Institute of Technology** in an embryology laboratory. She worked as an assistant to a postdoctoral fellow, helping with his research. She decided to study biology in college and later on added french as a double major. She applied to an evolutionary biology lab where she was able to do field work as well as conduct lab experiments.

In 2016 for a period of six months she worked outside of school to balance her view of the world. During this time she worked as a front of house employee at a food retail store where she learned about customer service, hiring employees and domestic and international shipping protocols.

When Yuka returned to college she continued at the evolutionary biology lab, and eventually was able to resume work at **California Institute of Technology** over the summer. There, she studied migratory patterns in neural crest cells and performed cardiac transplants in early stage galline (chicken) embryos. She was able to work independently and wrote her own protocols and worked alongside postdoctoral fellows.

Yuka's international background and triple nationality (American, French and Japanese) has given her a broad and diverse view of the world and cultural understanding which she wishes to bring to bear on her professional life as it unfolds.

Yuka's goal is to find gainful employment in the scientific community resulting in her continued development in this field and is open to the idea of ongoing education.

Experience

2019 to Present

Scientific/Design Researcher, Zap Ink Studios- Sunland, CA

Worked on researching scientific design criteria for a mobile test laboratory to combat the Covid-19 Coronavirus.

Project details available on the Zap Ink website: zapinkstudios.com

May 2019 to Sept. 2019

Laboratory Assistant, California Institute of Technology - Pasadena, CA

Assistant to Dr. Maxellande Ezin in Bronner Laboratory studying developmental biology. The research also carried over to her lab at Loyola Marymount University. The research will eventually lead to a publication. Yuka studied the migratory patterns of neural crest cells in galline cardiac embryos

Jan. 2016 to June 2016

Front of House Employee, Jackie's Cookie Connection - Santa Monica, CA

Primarily worked as front of house with sales at the cash register. Developed customer service skills. Helped with packaging of cookies. Baking of large and small sized cookies.

2015 to 2019

Laboratory Intern, Loyola Marymount University - Los Angeles, CA

Did research under Dr. Ramirez studying the evolutionary biology of spiders. Continued to perform lab duties as well as assist with data for published research.

2014 to 2015

Assistant to Post Doctoral Scholars, California Institute of Technology - Pasadena, CA

Assistant to Post Doctoral Scholars in Bronner Laboratory studying developmental biology. Yuka's duties included making solutions, performing general lab duties and basic lab experiments. Position was critical to Post Doctoral Scholar as my work helped with the research which will lead to the publication of the research.

2012 to 2015

Tutor, Mayfield Senior School - Pasadena, CA

As a member of the National Honors Society, Yuka spent time helping fellow classmates that were in need of academic help. She became a tutor and helped my peers with French or Biology issues. She set up studying techniques for students which enabled them to prepare for their exam.

2012 to 2014

Volunteer Animal Caretaker

Blue Cross Animal Hospital - Pacific Palisades, CA

2011 to 2014

Volunteer Librarian Assistant

Altadena Library District Central Library - Altadena, CA

Education

Bachelor's in Biology

Loyola Marymount University - Los Angeles, CA September 2014 to Present

High school

Mayfield Senior School - Pasadena, CA September 2010 to May 2014

Skills

- Lab Assistant • Laboratory Experience
- Laboratory Procedures •Scientific Research
- Competent writing research summary
- Proficient at technical writing for lab procedures
- Fluent in French, verbal and written
- Confident orally presenting scientific data to scientists using Keynote

Laboratory Experience

- Optimized protocol for paraffin processing of large tissue sample
- Tested and maintained the current duration for paraformaldehyde fixation
- Shortened dehydration and histosol clearing
- Determined precise parameters for the infiltration with paraplast
- Corrected and adjusted unforeseen issues with temperature fluctuation in paraffin oven and positioning method for embedding in wax cassettes
- Trained and mastered microtome sectioning (5 μ m-60 μ m)
- Streamlined the steps for deparaffinization and antigen retrieval
- Optimized antibody staining procedures with and without tyramide amplification
- Tested different concentrations of primary and secondary antibodies to ensure that the optimal antibody signal was discovered
- Developed a new set of washing protocols for the antibodies
- Produced a variety of solutions including the relevant calculations
- formula weights, molecular weights, molarity (g/mole), percentages, concentrations (ml/L, g/L), and dilutions

Laboratory Skills

- Pipetting
- Gel Electrophoresis
- Operation of needle puller
- Antibody staining
- Whole mount in situ hybridization
- Cryosectioning
- Collection and dissection of chicken embryos
- Inking the chick embryos and labeling with lipophilic dye
- Injection of lamprey embryos with air pressure technique
- Dechoriation and sorting of lamprey embryos

References

References upon request