

Curriculum Vitae/Resume

O. Marie Lacour

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RESEARCH EXPERIENCE

Liu Lab

December 2023– Present

- Research emphasis on the olfactory system in association with Alzheimer’s disease
- Neural and circuitry processes investigated through state-of-the-art technology (cellular imaging; optogenetics; in vivo electrophysiology; behavioral approaches)
- Animal work, in vivo and in vitro

Integrated Life Sciences Lab Rotations

August 2023 - December 2023

Dr. Shaolin Liu Lab (Alzheimer’s Disease and the Olfactory system; TBI; Animal, Biomedical and Translational)

- Observation: virus injection in APoE4; fiber photometry; perfusion; immunohistochemistry imaging; patch clamp electrophysiology
- UGA Animal Facility in-person Animal Handling and Safety training

Dr. Daichi Kamiyama (Neuronal circuitry; Drosophila)

- Two-photon microscopy training
- Drosophila proficiency techniques: dissection; live imaging; recombination; husbandry; Fiji Image J analysis
- Presented findings from Neuromuscular Junction (NMJ) rotation project: Neuron-specific confluence of calcium dynamics during drosophila embryogenesis and larvae development and the associations to the neuromuscular junction

Dr. Nikolay Filipov (Gulf-war illness research; Animal and Human)

- PEP Animal handling and safety training
- Open field test scoring of treatment and non-treatment animal assay
- Hands-on-training technique training: Enzyme-linked immunosorbent assay; cryostat cerebellum and SB sectioning; immunohistochemistry fluorescent imaging

Simply Neuroscience Action Potential Advisor Program (APAP) Rising Cohort

August 2021 – Present

Accepted as an Action Potential neuroscience humanities and brain enthusiast

- Collaborated with APAP Columbia University mentor on Fall 2021 research project
- Explored strategies for advancement in understanding how motor neuron activity is associated with specific genes linked to cell replication
- Support Post-doc research mentor in motor neuron functionality of zebrafish

Sleep Virtual Reality (VR) Study

August 2021 -May 2023

Emotion Decision-Making (EDM) Lab

- Processed study participants for 24-hour sleep deprivation virtual Reality (VR) study.
- Directed and facilitated subjects; data logging and evaluation of sleepiness scale
- Collaborated with multiple discipline labs for sleep deprivation study, including Human Factors, Psychology, Neuroscience, and Engineering
- Data coding of assessment scores, Utilization of Python, R-Studio, and statistical quantification in SSPS

Cognitive Reappraisal

April 2021 – May 2023

EDM Lab

- Served on research team that studies cognitive reappraisal in relation to perceived stress
- Performed data entry, psychometric assessment coding, Qualtrics formatting, and Qualtrics self-report coding
- Python, and R-Studio data integration; programming of assessment scores, and data analysis
- Designed and conducted quantitative research of technology for data analysis; SSPS, Jove, R Studio, Python, Spider, and various Anaconda imaging integration.

EDUCATION

PhD, Neuroscience

Expected 2028

University of Georgia; Athens, GA

- Osborne Assistantship Award

July 2022

Bachelor of Science, Psychology

May 2022

University of Houston-Clear Lake; Houston, TX

GPA: 3.97

Cum Laude

Relevant Coursework: Behavioral Neuroscience, Research and Practice Behavior Analysis, Brain and Behavior, Biological Psychology, Anatomy and Physiology, Research Methods and Statistics, Pharmaceutical Drugs: Drugs and Behavior, Statistical analysis; Experimental Research and Statistics, Behavioral Neuroscience, and Research methods of Applied Behavioral Analysis

- Analysis of functional magnetic imaging resonance (fMRI), and electroencephalogram (EEG)
- Animal dissections: Sheep brains

Research Project Design (Course): Older Adults' Cognition: Exercise Behaviors **January 2021- May 2021**

- Dean's List
- Honor Society-Gamma Gamma Chapter

Bachelor of Arts Journalism & Psychology

August 1998 – January 2001

Metropolitan State College of Denver; Denver, CO

GPA: 3.91

- 121 Credits Earned

PROFESSIONAL DEVELOPMENT:

UGA Graduate and Professional Scholars (GAPS), Corresponding Secretary

May 2023- Present

Psi Chi International Honor Society, Co-President; UHCL

May 2021 - Present

Psychology Club, Secretary/Director of Membership

May 2021 – July 2023

Neuroscience Student Organization, Community Outreach Officer; UHCL

August 2021 – July 2023

Pathways to Stem Careers; UHCL

September 2020 – July 2023

Student Government Association-Psi Chi Representative); UHCL

September 2020 – July 2023

LEADERSHIP EXPERIENCE

Co-President, Psi Chi International Honor Society- UHCL chapter

- Presided over meetings, outlined and manage meeting agenda supportive of student member enrichment
- Mentored and taught mini sessions related to academic success, studying skills, and resource utilization
- Present community outreach presentation linking student organization and local non-profit organizations (i.e., Atrium, Court Appointed Child Advocate CASA, and WCE)
- Management of the student organization accounts; announcements, event planning, and project management
- Process and approve Psi Chi and Psychology Club membership applications
- Prepare membership materials, including certificates for inducting members

National Leadership and Success- UHCL Chapter

- Honored nominee for academic achievement and leadership excellence

January 2021 – July 2023

PROFESSIONAL EXPERIENCE:

HIIT Trainer and Fitness Instructor

October 2023 - Present

Crunch Fitness; Athens, GA

- High intensity interval training for long-term participant success focused on neuromuscular activation and brain-body connection.
- Develop, and choreograph routines, choose appropriate rhythm, effectively cue participants, as well as teach licensed choreographed tracks class specific. Lead group fitness classes, small group training,

and private client sessions in a safe, professional, and motivational manner.

Health and Wellness Solutions Strategist, CPT & Fitness Instructor

November 2017 -July 2023

YMCA of Greater Houston; Houston, TX

- Assessed client needs; prescribed custom-tailored physical activity programs associated with improved quality of life, from managing mental constraints to enhancing physiological response. Master fitness counselor, educator, and Wellness Coach.
- Taught energy-derived group fitness classes; structured course direction on benefits associated with interval training; motivated participants to identify and objectify perceived effort, and strive for
- Nourishing and enriching High-Intensity Interval Training class; spark continued growth in participation and attendance.
- Develop customized fitness strategies, program development, exercise applications and fitness classes supportive of various fitness levels, structured design associated with highest activation of metabolic conditioning, cardio-respiratory conditioning, lactic thresh-hold push, and VO2Max enhancement to achieve fitness goals.
- Teach safe, effective exercises to a variety of populations
- Perform and entertain high-energy, structured, effective group fitness classes. Plan and execute successful “pop-up” RIPPED to The Core event. Grew HIIT class participation.
- Develop customized fitness strategies, program development, exercise applications and fitness classes supportive of various fitness levels, structured choreography to transform health and achieve fitness goals.
- NCCPT & NCSF Certified- CPT, XTREME, RIPPED CERTIFIED INSTRUCTOR, HIIT, CORE, TABATA, TRX Master Certified Trainer, Kickboxing Certified, Maxtrix Cycle Certified Instructor

Executive Sales and Account Manager

November 2012 – January 2014

Boreview Services, LLC; Houston, TX

- Unique and custom-tailored presentations on measuring while drilling and logging while drilling services (MWD and LWD), manufacturing, and engineering software integration.
- Implemented innovative, creative, and enthusiastic marketing and sales action plan correlated to the maximum capacity of kits and services utilized for four consecutive months.
- Executive-level project management; Increased monthly revenue to 338k a month in the first quarter.

Financial Strategies Analyst

February 2007 – October 2012

Mass Mutual Financial Group, Wealth Management team; Denver, CO

- Communication-driven needs assessment strategies; Drove sales of financial products, including life insurance and all aspects of risk management by creating; Industry networking at national events
- Conducted customized presentations: Analyzed revenue, assets, and presented options associated to greatest long-term appreciation; Correlations of analysis to the appropriation of the financial plan
- Maintained professional code of ethics; Regular maintenance of continuing education in relevant courses, exceeded above and beyond license governing agent requirements.

RESEARCH INTERESTS

I am interested in the viability of multi-element factors, inclusive of neural components interactions, as predictors of circuitry plasticity in association with external variables of aging populations. My personal interests are tied to studying neural components of reward-based motivation and its association with cognitive functions. For example, what happens in the brain when an individual engages in a bout of physical activity? I am also interested in neural physiology and neurobiology linked to behavior, and associations to neuropathology, with emphasis on translational application. My objective is to support, learn, discover, and advance knowledge in the neuroscience and biomedical fields.

REFERENCES

1. Dr. Christine Walther

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2. Dr. Georgina Moreno

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6. Timothy Moore

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