ANDREA RUIZ D'ARGENCE

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Education

University of California, San Diego — September 2021- June 2025
Bachelor of Science with a Specialization in Cognitive and Behavioral Neuroscience — *Current GPA: 3.673*

Research Experience

University of California, San Diego - Department of Cognitive Science — **August 2022 - Present**
Undergraduate Researcher - Advisor: Dr. Bradley Voytek — *La Jolla, CA*

- Analyzed open-source electrophysiological recordings in macaques of waveform features to decode the neural mechanisms of visual processing
- Applied cutting-edge, time resolved spectral parameterization to study the temporal representation of sensory information in neural activity

Salk Institute for Biological Studies — **October 2023 - July 2024**
Lab Technician I - Advisor: Dr. Kay Tye — *La Jolla, CA*

- Applied multidisciplinary approaches (optogenetics, immunohistochemistry, pose estimation) to study the time course of social isolation and dopamine dynamics in the medial prefrontal cortex of mice during social contact following isolation

The Jackson Laboratory — **May 2023 - August 2023**
Summer Intern - Advisor: Dr. Mary Teena Joy — *Bar Harbor, ME*

- Developed a pipeline using open-Source computational toolboxes for calcium imaging recordings to determine time-locked neuronal activity and task related changes in fluorescence

University of California, San Diego - Department of Psychiatry — **September 2022 - June 2023**
Undergraduate Researcher - Advisor: Dr. Olivier George — *La Jolla, CA*

- Characterized cocaine or oxycodone addiction-like behavior in rats to identify the neurocircuitry mediating the effects of drug addiction

Weizmann Institute of Science — **July 2021 - August 2021**
Summer Intern - Advisor: Itay Tirosh — *Rehovot, Israel (remote)*

- Single-cell RNASeq analysis of cellular heterogeneity in viral-driven cancers in Nasopharyngeal carcinoma patients

Publications

Shankar K, Bonnet-Zahedi S, Milan K, **D'Argence AR**, Sneddon E, Qiao R, Chonwattangul S, Carrette LLG, George O (2024). Acute nicotine activates orectic and inhibits anorectic brain regions in rats exposed to chronic nicotine. *Neuropharmacology*, 253, 109959. doi: https://doi.org/10.1016/j.neuropharm.2024.109959

Additional Training

Mike X Cohen's - Complete linear algebra: theory and implementation in code — **2024**
- A deep understanding of deep learning

Grants & Awards

UCSD School of Social Sciences Special Initiatives Fund; Award: $4,098 — **2024**
Translation of *Neuromatch Academy* Computational Neuroscience Education Resources to Spanish for Globally-Accessible Education

Travel Award, Annual Biomedical Research Conference for Minoritized Scientists (ABRCMS) — **2023**

Presentations

D'Argence AR, Preston MW, Voytek B. Stimulus-evoked changes in aperiodic electrophysiological activity in macaque visual cortex. *Society for Neuroscience;* 2024, October 7; Chicago, IL.

D'Argence AR, Preston MW, Voytek B. Stimulus-evoked changes in aperiodic electrophysiological activity in macaque visual cortex. *UC San Diego Summer Research Conference;* 2024, August 14; La Jolla, CA.

D'Argence AR, Preston MW, Voytek B. Actividad asincrónica cerebral en procesos visuales. *Community and Science Advancement in Spanish at UC San Diego;* 2024, July 18; La Jolla, CA. **Presentation done in Spanish

D'Argence AR, Alasoadura M, Joy MT. Cortex-wide in-vivo two-photon calcium imaging analysis of mice during skilled reaching. *Annual Biomedical Research Conference for Minoritized Scientists (ABRCMS)*; 2023, November 17; Phoenix, AZ.

D'Argence AR, Alasoadura M, Joy MT. Cortex-wide in-vivo two-photon calcium imaging analysis of mice during skilled reaching. *St. Jude Children's Hospital National Symposium for Predoctoral Research*; 2023, October 13; Memphis, TN.

D'Argence AR, Alasoadura M, Joy MT. Cortex-wide in-vivo two-photon calcium imaging analysis of mice during skilled reaching. *The Jackson Laboratory Summer Student Program Symposium*; 2023, August 10; Bar Harbor, ME.

D'Argence AR, Ramborger JK, Vang A, Lau JJ, Milan K, Chun LE, Hu A, Huang Y, Sichel B, Othman D, Brennan M, Woods LS, Palmer AA, Carrette LLG, George O. Individual differences of within-session cocaine or oxycodone self-administration behavior in heterogeneous stock rats. Lewis L. Judd Young Investigators Symposium; 2023, April 25; La Jolla, CA.

Outreach, Community Advancement & Recognitions

2024 **Duke University**
Scholar; Future Blue Devils Days

Brown University
Scholar; Doctoral Preview Day

Científico Latino
Scholar; Graduate Student Mentorship Initiative (CL-GSMI)

Yale University
Scholar; Program to Advance Training in Health & Sciences/Next-Generation Excellence Initiative (PATHS/NGEI)

2023 **University of California, San Diego**
Presentation; "Pathways to PhD", through the first undergraduate M.D.-Ph.D. Society at UC San Diego, presented to an audience of ~30 college-level students on learned tips for graduate school applications from diversity programs

University of Pennsylvania
Scholar; Diversity Equity Engagement at Penn in STEM Program (DEEPenn)

Instituto Tecnológico y de Estudios Superiores de Monterrey
Presentation; "Finding Opportunities Abroad, Sharing International Experiences", audience of ~150 high school students

Skills

Proficiency in Python, R, Excel and Microsoft Office	English and Spanish proficiency	Detail oriented
Problem solving	Collaborative mindset	Self-management