

# ANDREA RUIZ D'ARGENCE

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## Education

### University of California, San Diego

Bachelor of Science with a Specialization in Cognitive and Behavioral Neuroscience

September 2021- June 2025

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 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 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 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

## 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

## 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>

# Presentations

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**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.  
Also presented at: casas (spanish)  
Also presented at: *Community and Science Advancement in Spanish at UC San Diego*; 2023, July 18; La Jolla, CA. \*\*Presentation was 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.  
Also presented at: *St. Jude Children's Hospital National Symposium for Predoctoral Research*; 2023, October 13; Memphis, TN.  
Also presented at: *The Jackson Laboratory SSP 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

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- 2024

**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

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|---|-------------------------------------|----------------------------------|
| Proficiency in Python, R, Excel<br>and Microsoft Office | English and Spanish<br>proficiency  | Detail oriented<br>Communication |
| Problem solving   | Collaborative mindset               | Self-management                  |
|   | High ability in scientific literacy |                                  |