Valerie Lam

408-628-3579 • valerielam@berkeley.edu

Education

University of California, Berkeley
College of Letters and Science
Bachelor of Arts in Integrative Biology, May 2020
Bachelor of Arts in Psychology, May 2020

Skills

Clinical. Administered subject questionnaires, collected medical history, and performed study procedures including MEG scans and neuropsychological testing. Managed key aspects of large clinical trials and coordinated appointment scheduling, discussion of study outcomes, complications, and case supervision scheduling during months long study involvement. Scored comprehensive neuropsychological assessments (e.g., WISC, CELF, VMI, BASC, CVLT, ADOS), ensuring accurate reconciliation for clinical research trials. Screened, enrolled, and obtained informed consent. Maintained clinical research experiment data quality through performing and regularly documenting experimental neurofeedback protocols on patients. Performed confidential intake sessions via phone for therapy clinic to collect relevant patient information and schedule therapy sessions through SOAP notes on EMR software. Measured electrical activity of brain waves, using electroencephalograph (EEG) instruments. Administered qEEG-guided neurofeedback (BrainMaster z-score) brain entrainment to adults and children and assisted in interpretation of results.

Project Management. Cultivated strategic relationships with healthcare and community partners, such as clinics and schools, through enrollment in beneficial clinical studies. Ensure regulatory compliance by managing IRB tasks for multi-year clinical study grants, including amendments and renewal submissions. Supervised project coordination between multiple departments, labs, and affiliated groups through efficient scheduling and networking. Created standardized procedure manuals and inventoried lab and office equipment. Maintained rapport and relationships with patients for effective communication and retention using empathic care and motivational interviewing. Communicated lab results to patients in order to form action plans to address any necessary follow up. Educated patients on neuromodulation devices, device safety, and device usage. Coordinated tissue sample dissection and collection for pilot data of future studies and other multi-modal studies, serving as the primary liaison between the anatomy dissection team and collaborating teams, including histology and microCT imaging groups, to ensure seamless integration of data across modalities. Built consistent coordination and communication with physicians, residents, and hospital staff. Fluent in Cantonese. Conversational fluency in Mandarin.

Data Processing. Managed and input data and patient information into REDcap, Microsoft Access, and EMR software. Updated database structures with corresponding protocol changes to maintain efficient data management, collection and analyses. Performed quality analysis on speech samples, MEG scan procedures, and neuropsychological assessments. Analyzed speech samples using Computerized Speech Lab (CSL) and Audacity to create multi-model speech profiles including vocal pitch, range, and response latency. Reconstructed brain activity and noise covariance from MEG data using empirical algorithms. Compiled speech data in Matlab to analyze pitch perturbation responses. Designed robust database schemas to manage anatomical data across spreadsheets, enabling data-driven insights for efficient downstream analysis in $15.1M NIH-funded contract. Performed data validation and standardization to ensure uniformity across multi-modal datasets for downstream analysis. Annotated MRI scans of cadavers, identifying anatomical landmarks to align with corresponding landmarks in CT scans and 3D nerve tracings, enabling co-registration across imaging modalities for integrated visualization and analysis. Proficient in Microsoft Access, Excel, Outlook, PowerPoint, and Word, and corresponding Google alternatives.

Research. Administered and/or monitored MEG scans, MRI scans, and qEEG imaging to acquire data such as measuring auditory evoked fields. Collected speech data, imaging, neuropsychological testing, and patient forms during subject visits. Altered pitch perturbation in vocal feedback to analyze patients' vocal response. Evaluated preschoolers' social-emotional capabilities to inform developmental psychology interventions for San Francisco school districts. Routinely made and autoclaved buffers, stock solutions, and growth media. Performed protein extraction and photosystem II isolation from *Spinacia oleracea* using ultracentrifuge, high-speed centrifuge, and

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detergent. Performed chlorophyll assays using spectrometer and used IMAGING-PAM fluorometer to measure non-photochemical quenching in *Arabidopsis thaliana* mutants. Sterilized contaminated UC Berkeley *Chlamydomonas* algae library biweekly. Inoculated *Escherichia coli* for colony isolation and growth. Utilized techniques such as Western blot, next-gen sequencing, microscopy, PCR, TLC, crystallization, column chromatography, and gel electrophoresis to synthesize and/or purify specimen(s). Co-authored manuscript on sciatic nerve fascicular morphology for preprint and ultimate publication. Executed precise cadaveric dissections of the vagus nerve using specialized surgical tools using novel full body dissection techniques. Comprehensively cataloged nerve branches, documenting detailed characteristics such as destination structures and precise in-body pathways for 3D rendering.

Teaching. Taught rotations of 15 college students human anatomical features using prosected cadavers, models and histological slides. Prepared and proctored human anatomy lab exams for 27 college students. Trained staff and doctorate students on new research protocols, procedure changes, and data collection/entry. Reported neglect and/or suspected abuse of students to supervisors. Collaborated with parents to incorporate at-home supplemental behavioral and/or academic support. Held biweekly one-on-one supplemental sessions for underachieving students. Helped 1st grade students develop mental operations and hypothetical deductive reasoning in math and English. Incorporated remedial math techniques such as basic addition into 7th grade math lessons due to extreme differences in math competency, improving grades by 20%.

Employment

Case Western Reserve University, Cleveland, OH
Research Assistant III (February 2024 - present)

University of California, San Francisco, San Francisco, CA
Neurodevelopmental Assessment & Imaging Lab, *Clinical Research Coordinator* (January 2023 - 2024)
Bishop Lab, *Clinical Research Coordinator* (April 2023 - January 2024)

The Education Team, Richmond, CA
Benito Juarez Elementary, *1st Grade General Education Teacher* (January 2022 - June 2022)
Richmond Charter Academy, *7th Grade Math Teacher* (October 2021 - December 2021)

Stanford University, Stanford, CA
SPARK Lab, *Research Assistant* (August 2021 - October 2021)

Family Tree Wellness Center, Oakland, CA
Patient Coordinator and *Administrative Assistant* (March 2021 - September 2021)

NorCal Brain Builders Neurotherapy, Walnut Creek, CA
Neurofeedback Technician and *Patient Coordinator* (June 2020 - November 2021)

University of California, Berkeley, Berkeley, CA
Department of Integrative Biology, *Student Instructor* (August 2019, 2020 - December 2019, 2020)
Department of Plant and Microbial Biology, *Research Assistant* (August 2019 - December 2020)