

Caitlin My Hanh Le

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EDUCATION

Temple University, Philadelphia PA

Expected: May 2028

Kornberg School of Dentistry

Dentistry

Temple University, Philadelphia PA

May 2024

College of Science and Technology, Honors College

Bachelor of Science, Biochemistry; Minor, Mathematics

North Montco Technical Career Center, Lansdale PA

September 2019 – June 2020

Biotechnology Research Laboratories

LABORATORY TECHNIQUES

- **Purification:** Extraction: solid-liquid / liquid-liquid; chromatography: column, thin-layer, gas; crystallization; recrystallization; distillation: simple, fractional
- **Laboratory/Research Instruments:** Spectroscopy: H NMR, UV/Vis; microscopy: bright field, phase contrast, dark field, fluorescence; centrifuges; incubators; volumetric glassware; balances: triple-beam, analytical
- **Biotechnology:** SDS-PAGE; polymerase chain reaction; genomic DNA isolation; microbial cell culture; mammalian cell culture; gram stain; restriction enzyme digestion; blue-white assay
- **Software:** IGOR, Spartan Molecular Modeling, Fiji

RESEARCH EXPERIENCE

Undergraduate Research Chemist

December 2021 – Present

Temple University, Philadelphia PA

Principal Investigator – Dr. Eric Borguet

~ 12 hours/week

- Study the catalytic activity of covalent-organic frameworks and metal-organic frameworks targeted towards chemical warfare agent simulants, peptides, and similar substrates
- Review and write scientific reports, design and perform experiments, analyze data from NMR and UV/Vis spectroscopy, and present research to answer interesting and important questions
- Collaborate directly with a team of 9 undergraduate, graduate, and post-doctoral colleagues

POSTER PRESENTATIONS

1. Presentation: "Zirconium oxyhydroxide catalyzed oxidation of cysteine," *American Physician Scientists Association (APSA) x Grey Matters Symposium*. Temple University, Philadelphia, PA, April 2023.
2. Presentation: "Zirconium oxyhydroxide catalyzed oxidation of cysteine," *Philadelphia Inorganic Colloquium*. The College of New Jersey, Ewing Township, NJ, April 2023.

ORAL PRESENTATIONS

1. Presentation: "Zirconium oxyhydroxide catalyzed oxidation of cysteine," *Intercollegiate Student Chemists Convention (ISCC)*. Lebanon Valley College, Annville, PA, April 2023.
2. Presentation: "Zirconium oxyhydroxide catalyzed oxidation of cysteine," *American Chemical Society (ACS) Fall 2023*. Moscone Center, San Francisco, CA, August 2023.

PUBLICATIONS

1. Gene-Based Therapies for Neurodegenerative Diseases, Shan, V.; Le, C.; Arruda, T.; Nakahara, K.; Becker, C.; Zeid, D. *Temple University Grey Matters Journal*, 2023.
<https://scholarshare.temple.edu/handle/20.500.12613/10167>
2. Zirconium oxyhydroxide catalyzed oxidation of cysteine. Le, C.; Devulapalli, V.S.D.; Bhattacharyya, A.; Dhar, S.; Sekhar, P.; Vaidhyanathan, R.; Borguet, E.
Manuscript in Preparation.

WORK EXPERIENCE

STEM Tutor – Temple University Philadelphia, PA

August 2023 – Present

- STEM tutor at Temple University, specializing in chemistry, biology, physics, and math, to provide one-on-one instruction to students in challenging courses
- Review and explain course content and concepts to enhance students' understanding and comprehension
- Assist in completing homework assignments, guide through problem-solving techniques, and develop personalized study plans with a focus on effective time management to prepare students for major exams

Freelance Artist – Self Employed Souderton, PA

January 2016 – Present

- Develop a portfolio of over 35 realistic, graphite portraits that showcase technical art skills to potential customers
- Sold 3 customized commissions at the Souderton-Telford Rotary Auction, resulting in \$2,075 donated to the community
- Manage supplies and materials, client portfolio, and budget across the sale of 40+ commissions

Manager, Receptionist, Nail Technician – Revive Nail Bar Hatfield, PA

January 2018 – September 2022

- Organize daily schedules manually for 10+ nail technicians, resulting in increased online and word of mouth reviews
- Resolve disputes with customers and manage daily appointments for 100+ clients, resulting in wait time reductions
- Monitor inventory levels to ensure timely restocking and maintenance of financial records
- Deliver consistent service excellence with professional nail drills and specialize in producing advanced nail art designs

HEALTHCARE EXPERIENCE

Dental Assistance and Observation – Borguet Main Line Dental Implants and Perio Narberth, PA

May 2023 – Present

- Assisted and observed in various procedures, including osseous surgery, connective tissue grafts, implants, scaling and root planning, and impressions under the close supervision of a skilled periodontist
- Worked closely with patients and the periodontist, actively participating in care and ensuring comfort throughout dental procedures
- Acquired proficiency in dental practice management software by effectively utilizing it to manage patient records, streamline administrative tasks, and produce advanced imaging

Observation – Coby Orthodontics Quakertown, PA

March 2023

- Followed and learned the general operations of an orthodontist's practice and the varying challenges encountered

- Studied the creativity, manual dexterity, and precision demonstrated in the artistic process of forming braces for a highly customized experience

**Observation – Elverson Dental Care
Morgantown, PA**

March 2023

- Observed patient interactions and learned effective communication skills with patients of all ages
- Shadowed general dentists during consultations and treatment planning sessions
- Gained knowledge of dental equipment, instruments, and procedures such as fillings, extractions, and implants

**Observation – Weaver, Reckner & Reinhart Dental Associates
Harleysville, PA**

January 2023

- Observed a team of dental assistants, hygienists, general dentists, orthodontists, and oral surgeons to understand general operations of each role and the workflow of a large office
- Studied patient care, office routines, sterilization procedures, and advanced equipment such as X-ray

COMMUNITY SERVICE

Volunteer Data Coordinator – Robotics for All

July 2023 – Present

Remote

- Spearhead the organization’s data management efforts by maintaining and overseeing the volunteer database on Google Sheets, ensuring up-to-date and accurate records of all volunteers across the nation
- Collaborate with other executive board members and the technology division to develop streamlined processes for data collection and administration, enhancing data integrity and efficiency
- Synchronize Google and Slack groups with the volunteer database, enabling seamless communication and coordination among team members and volunteers
- Conduct comprehensive audits of Slack channels and removal of inactive volunteers from the database, optimizing resource allocation and maintaining an engaged volunteer network

**Debate and Chess Camp Counselor – After School Activities Partnerships
Carver High School, Philadelphia, PA**

July 10, 2023 – July 21, 2023

- Facilitated speech and debate sessions, offering one-on-one coaching to students to develop their communication and public speaking skills, resulting in noticeable improvements in their delivery and confidence
- Instructed elementary students in the fundamentals of chess, providing personalized guidance to enhance their strategic thinking, problem-solving abilities, and overall chess proficiency
- Assisted in judging speech tournaments for students, ensuring fair and constructive evaluations while encouraging them to refine their public speaking techniques

Lead Instructor – Robotics for All

March 2023 – Present

Remote

- Conduct synchronous classes twice a week to teach Code.org and the fundamentals of computer science
- Review homework, consistently communicate with parents, and manage classrooms to provide STEM education for elementary students from underserved communities
- Debug technical issues and problem solve to assist children and ensure smooth curricula

Crisis Counselor – Crisis Text Line

January 2023 – Present

Remote

- Commitment of 200+ hours to produce high-quality, text-based mental health support and crisis intervention to seek creative and innovative solutions

- Promote mental well-being, invest in authentic dialogue, and center equity for a safe environment
- Practice cultural competence, empathy, responsiveness, and humility to build rapport with texters and work collaboratively to discover next steps for managing emotions

**Scrabble Club Leader – After School Activities Partnerships
Jay Cooke Elementary School, Philadelphia, PA**

January 2023 – Present

- Raise awareness of the dangers of the after-school hours for unsupervised youth and serve as a role-model that children can trust
- Lead lessons and games once a week to teach important lessons about teamwork and sportsmanship
- Celebrate teamwork and inspire joy for wordplay through the reinforcement of reading, vocabulary, dictionary, and math skills for youth

**Scrabble Tournament Judge – After School Activities Partnerships
Weitzman National Museum of American Jewish History, Philadelphia, PA**

May 9, 2023

- Provided crucial support as a Scrabble Judge at a tournament for underrepresented children in the Philadelphia region by resolving word disputes and challenges, ensuring fair gameplay, and promoting healthy sportsmanship

**Volunteer – Love Run
Philadelphia, PA**

March 25, 2023

- Ensured guests were greeted upon entrance and provided directions or information regarding event details
- Provided technological assistance to find runners' bib numbers and directed them towards locating their products

**Volunteer – Red Cross Blood Drive
Health Link Society, Temple University, Philadelphia, PA**

January 23, 2023

- Greeted and checked-in donors by recording their information and communicating details about their donation
- Created a warm and welcoming presence by informing donors of after-care steps and providing snacks

AFFILIATIONS

**Co-President and Safety Officer – Tennis Club
Temple University, Philadelphia, PA**

August 2021 – Present

- Management and design of practices, fund raisers, and club schedules for 30+ team members
- Delegate tasks and support the roles of all other executive board members through organization and communication of responsibilities
- Lead in the qualification for Tennis on Campus 2023 National Championships in Surprise, Arizona

**Community Affairs Director – Chemical Society
Temple University, Philadelphia, PA**

January 2023 – Present

- Develop and implement community engagement strategies to increase awareness and participation in the club's activities and events
- Collaborate with club leadership and members to execute community service projects and volunteer initiatives through events like Setting the Spike for Science and Homework Sessions
- Track and report on community engagement metrics to measure the success of outreach events

**Scientific Reviewer – Grey Matters Journal
Temple University, Philadelphia, PA**

January 2023 – Present

- Maintain the informational integrity of articles to foster better communication and understanding between the scientific community and the general public

- Aide designated author in their writing process by editing, refining, and developing their work
- Inspect sources regarding accuracy and how author utilized them, create and edit APA citations, and clarify confusing scientific information
- Communicate and collaborate with a group of 7 team members to produce an article on Gene-Based Therapies for Neurodegenerative Disease for timely publication of the journal

Social Media Committee for Mentorship – Dental Shadows

May 2023 – Present

- Serve as a Social Media Committee Member in a nationwide organization dedicated to supporting students in their pre-dental journey by acting as designated liaison between the Social Media Committee and the Mentorship Committee
- Create visually appealing social media posts using Canva to promote the mentorship program and engage with the organization’s target audience
- Conduct biweekly meetings with the committee and other executive board members to discuss strategies, brainstorm ideas, and provide updates on social media initiatives

Member – Pre-Dental Health Society

January 2023 – Present

Temple University, Philadelphia, PA

- Partake in general body meetings to connect with admissions committees from different schools, attend guest speakers, and receive faculty support
- Expand connections with faculty and peers and participate in service events to strengthen the community

PROFESSIONAL ACTIVITIES

Member of American Student Dental Association (ASDA)

January 2023 – Present

Member of American Chemical Society (ACS)

January 2023 – Present

CERTIFICATIONS

American Red Cross – ARC Adult and Pediatric First Aid/CPR/AED

February 2023

University of Pennsylvania – Introduction to Dental Medicine Course

March 2023

AWARDS / SCHOLARSHIPS

United States Tennis Association (USTA) Middle States Tennis on Campus Leader of the Year

October 2023

Temple University Creative Arts, Research, and Scholarship (CARAS) Travel Grant

July 2023

86th Intercollegiate Student Chemists Convention: First Place Award in Inorganic Chemistry

April 2023

Temple University Founder’s Scholar

Fall 2020 – Present

Bucks County Erin Elizabeth Prediger Scholarship

Fall 2020 – Present

Dean’s List

Fall 2020 – Spring 2021, Spring 2022, Spring 2023

REFERENCES

Dr. Eric Borguet, Principal Investigator of Research and Professor of Chemistry, Temple University, eborguet@temple.edu

Giovanni Gravina, Professor of Mathematics, Temple University, giovanni.gravina@temple.edu