

HELEN KARIMI

Helen.karimi@tufts.edu

EDUCATION

M.D., Tufts University School of Medicine, Boston, MA, Anticipated Graduation: May 2026

- Field of Interest: Neurosurgery

M.S., University of Connecticut, Storrs, CT, May 2021

- GPA: 4.10/4.00
- Discipline: Surgical Neurophysiology
- Selected to serve as the *Student Representative* on the program's Advisory Board

Certifications:

- Certification in Neurophysiologic Intraoperative Monitoring, ABRET Neurodiagnostic Credentialing and Accreditation, December 2021
- Youth Mental Health First Aid, National Council for Behavioral Health, May 2021
- Adult Mental Health First Aid, National Council for Behavioral Health, March 2021
- Heartsaver CPR/AED, American Heart Association, August 2020

Trainings:

- Infection Prevention and Control for COVID-19 Virus, World Health Organization, May 2020
- Standard precautions: hand hygiene, World Health Organization, May 2020
- HIPAA Security and Privacy, University of Connecticut, June 2020

M.A., Wesleyan University, Middletown, CT, May 2020

- GPA: 4.00/4.00
- Discipline: Molecular Biology and Biochemistry

Graduate Thesis Dissertation: *To Kill or Not to Kill: Exploiting the Bacterial R-M System is a Prerequisite to Studying the BcnI Mediated DNA Cleavage Mechanism*

Trainings:

- Bystander Intervention, Wesleyan Office of Health Education, June 2019
- Facilitation Skills, Wesleyan Office of Health Education, June 2019
- Active Listening and Motivational Interviewing, Wesleyan Office of Health Education, June 2019

B.A., Wesleyan University, Middletown, CT, May 2019

- GPA: 3.64/4.00
- Majors: Neuroscience and Behavior, Molecular Biology and Biochemistry

Achievements:

- Scott Biomedical Prize for excelling and showing interest in a career in academic or applied medicine, May 2019
- American Society for Biochemistry and Molecular Biology Undergraduate Research Award, April 2018
- Dean's List, Wesleyan University, Spring 2018
- Annual Biomedical Research Conference for Minority Students Recognition of Outstanding Poster Presentation Award, November 2016

Publications/Presentations:

PUBLICATIONS

Genomics analysis of hexanoic acid exposure in *Drosophila* species, Drum, Z.A., Lanno, S.M., Ahamed, M., Barr, W., Bekele, B., Biester, A., Castro, C., Connolly, L., DelGaudio, N., Humphrey, W., **Karimi, H.**, Karolczak, S., Lawrence, T., McCracken, A., Miller-Medzon, N., Murphy, L., Park, C., Park, S., Qiu, C., Serra, K., Snyder, G., Strauss, A., Tang, S., Vyzas, C., and J.D. Coolon., G3 - Genes - Genomes -Genetics, January 2022.

Submitted Manuscripts

Intraoperative triggered electromyography for pedicle screw placement under spinal anesthesia: a preliminary report., Matthew Kanter, Nicholas S. Hernandez, Michelle Olmos, **Helen Karimi**, Ron I. Riesenburger MD, and James T. Kryzanski MD., Operative Neurosurgery. Submitted August 17, 2022.

PRESENTATIONS

“To Kill or Not to Kill: Exploiting the Bacterial R-M System is a Prerequisite to Studying the BcnI Mediated DNA Cleavage Mechanism,” H. Karimi. Thesis defense presented at Wesleyan University, Middletown, CT, 04 May 2020.

“To Kill or Not to Kill: Mimicking the Bacterial Immune System for Expression of a Toxic Restriction Endonuclease,” H. Karimi. Talk presented at Wesleyan Molecular Biology and Biochemistry Departmental Seminar Series, Middletown, CT, 04 March 2020.

“All Good Things Come In Pairs: Uncovering the Activity of BcnI Through Co-localization Microscopy,” H. Karimi. Talk presented at Wesleyan University Graduate Student Speaker Series, Middletown, CT, 11 November 2019.

POSTER

“Effect of Subcuticular versus Running Closure Technique on Rate of Cerebrospinal Fluid Leak Following Filum Terminale Resection in Tethered Cord Syndrome,” **Helen Karimi**, Rahul A. Sastry, Owen P. Leary, Petra M. Klinge. Poster presented at the New England Neurosurgical Society Annual Conference, Chatham, MA, 23 June 2022.

“Revealing kinetic intermediates of the BcnI mediated DNA cleavage mechanism,” **H. Karimi**, C.M. Eton. Poster presented at Wesleyan University Summer Research Program Poster Session, Middletown, CT, 27 July 2018.

“Employing Y2H clones to illuminate which proteins interact with Zip1 during meiosis,” **H. Karimi**, A. Ashley. Poster presented at Advanced Lab in Biology and Genetics Poster Session, Middletown, CT, 10 May 2018.

“Reducing nonspecific adhesion for smFRET studies,” **H. Karimi**, A. Liu, C.M. Eton. Poster presented at Annual Biomedical Research Conference for Minority Students, Phoenix, AZ, 1 – 4 November 2017.

“Reducing nonspecific adhesion for smFRET studies,” **H. Karimi**, A. Liu, C.M. Eton. Poster presented at Wesleyan University Summer Research Program Poster Session, Middletown, CT, 28 July 2017.

“Coverslip Functionalization for Single-Molecule FRET,” **H. Karimi**, C.M. Eton. Poster presented at Annual Biomedical Research Conference for Minority Students, Tampa, FL, 9-12 November 2016.

“Coverslip Functionalization for Single-Molecule FRET,” **H. Karimi**, C.M. Eton. Poster presented at Wesleyan University Summer Research Program Poster Session, Middletown, CT, 28 July 2016.

Health and Science

Research Intern, Tufts Medical Center, Tufts University School of Medicine, Department of Neurosurgery, [Mentors: Dr. Ron Riesenburger, M.D; Dr. James Kryzanski, M.D] Boston, MA. July 2022 – Present.

Research Intern, Rhode Island Hospital, Warren Alpert Medical School of Brown University, Department of Neurosurgery, [Mentor: Dr. Petra Klinge M.D, Ph.D] Providence, RI. December 2021 – Present.

Surgical Neurophysiologist I, SpecialtyCare IONM Services [Jonathan Mooney, Director of Operations], Providence, RI. May 2021 – May 2022. 40-80 Hrs/Wk. Provide intraoperative neuromonitoring for patients undergoing surgical procedures which place the nervous system at risk of damage. Help prevent or predict postoperative neurological deficits. Clearly explain the role of monitoring to patients and their families as well as OR staff. Develop a comprehensive monitoring plan based on neural structures at risk, surgeon's recommendations, and patient medical history. Consult with anesthesia team regarding the use of anesthetic agents for optimal monitoring and patient safety. Prepare patient for monitoring while maintaining a sterile environment. Establish and update medical record documentation in accordance with hospital and SpecialtyCare policy. Implement appropriate troubleshooting methods to ensure the accuracy of recorded neurophysiological signals. Ensure timely communication with the surgeon, anesthesia team, and remote neurologist regarding the progression of the surgery, changes in patients' neurological status, and troubleshooting attempts. Understand the effects of physiological, surgical, and anesthetic conditions on neurophysiological recordings. Follow SpecialtyCare needle, safety, and patient privacy practices. Assist with preparation of a professional report by continually updating relevant documentation. Assist OR staff as requested and provide emotional support to patients as needed. Perform a focused neurological assessment on patients post-operation to assess for neurological deficits.

Surgical Neurophysiologist Trainee, John Dempsey Hospital, [Payam Andalib, MD, PhD, CNIM], Farmington, CT. September 2020 – May 2021. 240 total hrs. Monitored the patient's nervous system during spinal surgery under supervision of certified intraoperative neurophysiologists. Safely placed needles into various anatomical areas of the body to set up for neuromonitoring. Documented the patient's health history, progression of the surgical case, and changes in patient's neurological status. Interpreted changes in the patient's neurological and determined their cause. Communicated with OR staff to prevent medical errors. Applied knowledge of neuroanatomy, anesthesiology, and various surgical procedures to contribute to the delivery of high quality and dignified patient care. Presented a clinical case study and attended presentations by other students and healthcare professionals to stay up to date on current findings.

Volunteer Companion, [Helen Treloar, PhD], Wesleyan University, Middletown, CT. November 2019 – March 2020. 70 total hours. Spent time with an elderly woman

afflicted with Alzheimer's disease. Attended to her social needs by planning and taking part in engaging activities at her home. Provided emotional support to help her cope with the limitations imposed by her condition.

Graduate Research Assistant, Department of Physics, Etson Lab, [Candice Etson, PhD], Wesleyan University, Middletown, CT. June 2019 – May 2020. 3000 total hours. Designed my master's thesis research study. Revised the lab's protocol for expressing a restriction endonuclease, BcnI, within an *E. coli* bacterial system. Fine-tuned experimental protocols to troubleshoot unexpected results and ensure the successful progression of my research project. Served as a mentor to a senior undergraduate thesis writer in the lab. Wrote and defended a 130-page thesis in order to provide guidelines for continuation of the project I worked on. Aided in recruitment and training of lab participants.

Undergraduate Research Assistant, Department of Physics, Etson Lab, [Candice Etson, PhD], Wesleyan University, Middletown, CT. March 2016 – May 2019. 1780 total hours. Employed Total Internal Reflection Fluorescence (TIRF) microscopy to uncover specific features of the mechanism by which a restriction endonuclease, BcnI, interacts with its target DNA sequence. Optimized relevant experimental protocols for use by all lab members to ensure proper investigation of biomolecules of interest via TIRF microscopy. Verified previously obtained data uncovering mechanistic features of the BcnI-mediated DNA cleavage mechanism using an in-vitro single molecule approach. Proposed an unexpected role played by dithiothreitol (DTT) in stabilizing restriction endonuclease activity. Selected to complete different research projects during a 10-week Research in Sciences Fellowship and presented findings at a poster presentation symposium (Summer of 2016, 2017, and 2018).

Fellow, Atlantis Project Fellowship, [Grace McLaurin, Program Coordinator], Istituto Giannina Gaslini Hospital, Genoa, Italy. January 3, 2018 – January 13, 2018. 30 total hours. Shadowed physicians in Neurosurgical and Neuromuscular Diseases departments at a hospital in Italy. Attended trainings on the hospital's protocols for interacting with patients and their families and maintaining a sterile environment. Consistently obeyed all established shadowing rules, procedures, and limitations. Explored the Italian culture, cuisine, and healthcare system. Navigated Genoa without prior knowledge of the Italian language. Discussed and analyzed differences between the U.S and Italian healthcare systems.

Student Research Assistant, Department of Molecular Biology and Biochemistry, Advanced Lab in Molecular Biology and Genetics, [Scott G. Holmes, PhD & Amy MacQueen, PhD], Wesleyan University, Middletown, CT. January 2018 – May 2018. 160 total hours. Collaborated with lab partner to complete two independent research projects in a timely manner. Utilized site-directed mutagenesis to investigate the function of the second globular domain of the linker histone (H1) yeast protein. Probed the interaction between two proteins, Hhop1 and Arp4, via an *in-vivo* crosslinking experiment to understand the mechanism of gene expression. Assessed the interaction between a variety of proteins at the synaptonemal complex with Zip1 during meiosis to

help a Wesleyan research faculty, Amy MacQueen, continue this project within her own lab. Guided and supported lab partner in understanding the goals and rationale of assigned research projects.

Volunteer, Emergency Department, [Kate Kearns, Volunteer Services], Middlesex Hospital, Middletown, CT. September 2016 – November 2016. 12 total hours. Cared for the non-clinical needs of patients in the Emergency Department to ensure patients' comfort. Folded and delivered linen to patient rooms and helped prepare rooms for new patients. Created a welcoming and safe environment for recovering patients by socializing with them and their families.

Clinical Research Fellow, Teachers and High School Students Program, [Thomas R. Hedges III, MD], Tufts Medical Center, Tufts Medical School, Boston, MA. July 1, 2015. 225 total hours. Shadowed a neuro-ophthalmologist, Dr. Hedges, in clinic while he met with patients during their appointments. Collected data on Plaquenil toxicity incidence rates in order to create a protocol for prevention and treatment of toxicity in patients. Presented research findings to approximately 10 medical professionals in order to provide guidance in treating Plaquenil toxicity. Attended human anatomy and physical diagnosis courses to prepare for medical school and a medical career.

Research Fellow, Broad Summer Scholars Program, Golub Lab, [Steven Corsello, MD], Broad Institute of MIT and Harvard, Boston, MA. June 2014 – August 2014. 270 total hours. Employed *in-vitro* cell culture tests on PC3 prostate cancer cell lines to confirm Connectivity Map (CMap) predictions that catalogue the cellular effects of a variety of drugs utilized for prostate cancer treatment. Analyzed experimental results to identify novel PI3 kinase inhibitors. Summarized research findings to staff of the Broad Institute during a poster session symposium.

Employment, Service to Community, and Extracurricular Activities

Co-Founder, Co-CEO, Neuroplex Industries, Inc. [Robert Beer II, Co-Founder & Co-CEO]. June 2022 – Present. Neuroplex Industries is committed to increasing the safety of surgeries by providing resources for improving neuromonitoring services. In striving for efficient, quality, standardized, and customizable medical care, we empower clinicians to focus their presence where it matters most - the care for each patient. At Neuroplex, patient safety and customer satisfaction come first.

Remote Volunteer Listener, 7 Cups of Tea, [Payam Andalib, MD, PhD, CNIM], <https://www.7cups.com>. January 2021 – September 2021. 5 Hrs/Wk. Provide remote mental health first aid to individuals around the world struggling with mental health challenges. Attend trainings on how to provide interventional support to individuals facing mental health challenges and lectures on various mental illnesses. Refer visitors of 7 Cups of Tea to professional resources when necessary and encourage those who are anxious about seeking care.

IONM Media Campaign Coordinator, University of Connecticut, [Payam Andalib, MD, PhD, CNIM], Storrs, CT, February 2021 – January 2022. 4 Hrs/Wk. www.youtube.com/channel/UCDOQs5PfvnRaaUMIMsYPNwA. Launching a media campaign to raise public awareness about the field of intraoperative neuromonitoring, encourage its utilization by medical professionals, and to provide professional guidance to present and future surgical neurophysiologists. Collaborate with the program's director, administrative assistant, students, and affiliated healthcare professionals to ensure the success of this project. Serve as a liaison between members contributing to the campaign.

Teaching Assistant, Department of Molecular Biology and Biochemistry, Advanced Lab in Molecular Biology & Genetics, [Scott G. Holmes, PhD], Wesleyan University, Middletown, CT, January 2020 – April 2020. 160 Hrs/Wk. Collaborated with four teaching assistants to prepare all necessary reagents, instruments, and biological samples for experiments to be conducted in class. Provided guidance to students to ensure the success of their experiments and their deep understanding of each project's rationale. Communicated with the course professor to understand his expectations of students with the aim of implementing an engaging learning environment.

Teaching Assistant, Department of Molecular Biology and Biochemistry, Principles of Biology I Lab, [Michelle Murulo, PhD], Wesleyan University, Middletown, CT, September 2019 – December 2019. 200 total hours. Independently led a 4 hour laboratory section with 16 students every week. Attended weekly trainings for teaching assistants in preparation for upcoming laboratory assignments. Guided students in understanding basic laboratory techniques and in completing course assignments. Prepared a ten minute pre-lab lecture to introduce students to basic laboratory techniques. Challenged students to think critically about the data they collected in class.

Peer Health Coach, Office of Health Education, WesWell, [Seirra Fowler, MPH, CHES, TTS], Wesleyan University, Middletown, CT, September 2019 – December 2019. 60 total hours. Trained to use motivational interviewing skills to help peers make healthy choices within a social college environment. Aimed to activate students' intrinsic motivation to increase patterns of positive behavior. Helped students transition to social life at Wesleyan University. Met one-on-one with >30 students to discuss their mental, social, and physical health on campus.

Teaching Assistant, Department of Molecular Biology and Biochemistry, Molecular Biology, [Scott G. Holmes, PhD], Wesleyan University, Middletown, CT, September 2019 – December 2019. 100 Hrs/Wk. Hosted weekly hour-long office hours to guide students in completing their assignments and studying for exams. Conveyed students' feedback to professor to ensure an engaging environment and students' long-term retention of course concepts. Helped professor grade exams. Guided students in improving their test-taking, analytic, and memorization skills.

Volunteer, Girls in Science Camp, [Alison O'Neil, PhD] Middletown, CT. August 5,

2019 – August 9, 2019. 45 total hours. Collaborated with camp advisor to develop and implement neuroscience activities for camp participants (grades 4 – 6). Discussed famous women in STEM to inspire young girls to pursue their interest in science. Ensured the safety of and interaction between camp participants. Led a neuroscience lesson plan and activity to teach participants about the basic structure of the brain and its functions.

Office Assistant, Office of Student Academic Resources, [Crystal Rose Hill, Accessibility Specialist], Wesleyan University, Middletown, CT, June 2019 – May 2020. 240 total hours. Coordinated and facilitated pair and group tutor matches for STEM courses. Collected and reviewed office data for annual reports and helped update the office website. Designed in-house academic resources for students including student planners to aid with time-management. Created a comprehensive website with resources to support students' transition to remote learning during the COVID-19 outbreak.

Circulation Assistant, Exley Science Library, [Linda Hurteau, Library Assistant], Wesleyan University, Middletown, CT, May 2019 – September 2019. 350 total hours. Provided help to students, faculty, and other visitors of the library. Charged and discharged materials and answered inquiries made by phone. Assured accurate shelving of materials.

Founder and President of Neuroscience Club, Department of Neuroscience and Behavior, [Gloster Aaron, PhD], Wesleyan University, Middletown, CT, October 2016 – May 2020. 300 total hours. Delegated leadership responsibilities and coordinated with club leaders to ensure that the organization's goals are met. Improved upon available academic resources for Neuroscience majors through communication with departmental staff and faculty. Helped raise close to \$500 for Mental Health America, a fundraiser aiming for equal access to treatment of mental illnesses. Prepared and implemented a teaching plan along with other members of the club to introduce elementary aged children to the structure and function of the brain. Initiated and coordinated the planning of a Brain Awareness Week focused on introducing students to a variety of mental illnesses. Upon graduation, prepared a training manual to help subsequent leaders carry on the club's mission.

Volunteer, St. Vincent de Paul Soup Kitchen, [Lydia Brewster, Volunteer Services] Middletown, CT. February 2015 – March 2020. 60 total hours. Helped prepare and hand out meals for those in need. Ensured sanitary conditions for visitors of the soup kitchen. Socialized with the people that come to the soup kitchen.

Peer Tutor, Office of Student Academic Resources, Principles of Biology II, [Laura Patey, Associate Dean for Student Academic Resources] Wesleyan University, Middletown, CT, January 2019 – May 2019. 14 total hours. Met a student for two hours weekly to review course material. Aided student in developing strategies for understanding and memorizing critical steps of biological pathways. Guided student in completing undergraduate major requirements and applying for internships and graduate school.

Teaching Assistant, Department of Molecular Biology and Biochemistry, Principles of Biology I, [Sarah Kopac, PhD], Wesleyan University, Middletown, CT, September 2018 – December 2018. 80 total hours. Hosted two weekly hour-long recitation sessions for 24 students to collaboratively work on problem sets. Modified course resources to guide students with studying for exams and hosted exam review sessions for 80 students. Served as a mentor to three first-time teaching assistants. Scheduled weekly two-hour long sessions to help students complete homework assignments and brainstorm avenues for improvement. Communicated students' concerns and suggestions to the professor to ensure their academic needs are met.

Peer Tutor, Office of Student Academic Resources, Principles of Biology I, [Laura Patey, Associate Dean for Student Academic Resources] Wesleyan University, Middletown, CT, September 2018 – December 2018. 11 total hours. Designed simplified models of course content to aid two students in digesting course concepts. Assessed students' academic strengths and weaknesses, focusing on developing strategies for addressing them throughout the course.

Mentor, Department of Physics, Etson Lab, [Candice Etson, PhD], Middletown, CT, June 2017 – May 2018. 60 total hours. Taught laboratory procedures and simplified overarching goals of ongoing research studies in the lab to three newly joined members. Supervised newly trained members to ensure their understanding of experimental procedures and assessed their readiness to undertake an independent project. Shared PowerPoint and poster presentations, experimental protocols, and a grant proposal with lab members to aid them in developing their own. Advised lab members in designing and troubleshooting experiments for their independent projects.

Peer Tutor, Office of Student Academic Resources, Organic Chemistry Laboratory [Laura Patey, Associate Dean for Student Academic Resources] Wesleyan University, Middletown, CT, January 2018 – May 2018. 25 total hours. Assisted student athlete in balancing her academic and extracurricular activities. Guided student in developing a schedule for completing course assignments on time, and creating an outline for the final research paper. Scheduled weekly two-hour long meetings with student to help her analyze and discuss experimental data obtained in the lab.

Volunteer, Girls in Science Camp, [Candice Etson, PhD] Middletown, CT. August 7, 2017 – August 11, 2017. 45 total hours. Aided camp advisor in preparing for camp activities. Interacted with camp participants (grades 4 – 6) during activities and lunch breaks. Coordinated with other camp advisors to ensure the safety of participants. Moderated social interactions between camp participants to ensure healthy and safe communication amongst them.

Teaching Assistant, Department of Molecular Biology and Biochemistry, Principles of Biology I, [Sarah Kopac, PhD], Wesleyan University, Middletown, CT, September 2017 – December 2017. 80 total hours. Reviewed weekly problem sets and designed visuals to help 12 students complete two-hour long problem set sessions. Compiled review

materials and created presentations to guide 80 students in studying for exams. Hosted weekly two-hour long sessions to help students digest course materials and to answer related questions beyond the scope of the course.

Peer Tutor, Office of Student Academic Resources, Principles of Biology I, [Laura Patey, Associate Dean for Student Academic Resources] Wesleyan University, Middletown, CT, September 2017 – December 2017. 30 total hours. Helped student develop study strategies and schedule for staying on track in the course. Encouraged student to apply for a teaching assistant position for the course the following semester.

Scholar, Department of Molecular Biology and Biochemistry, Wesleyan Mathematics and Science Scholar Program, [Ishita Murkeji, PhD], Wesleyan University, Middletown, CT, September 2015 – December 2017. 45 total hours. Selected to attend a course once a week for one year to learn how to succeed in college and participate in community service projects. Served as a mentor to incoming scholars and students interested in STEM fields during panel discussions. Continued to stay involved in the program by serving as a mentor to newly selected students.

Teaching Assistant, Department of Molecular Biology and Biochemistry, Principles of Biology I, [Rosemary Doris, PhD], Wesleyan University, Middletown, CT, September 2016 – December 2016. 60 total hours. Prepared review materials and held exam review sessions for 80 students. Hosted weekly two-hour sessions to guide students in completing homework assignments and digesting course concepts.

Peer Tutor, Office of Student Academic Resources, Principles of Biology I, [Laura Patey, Associate Dean for Student Academic Resources], Wesleyan University, Middletown, CT, September 2016 – December 2016. 20 total hours. Organized and facilitated weekly two-hour sessions with two students to review course concepts. Motivated and aided students in developing study strategies and agendas for staying on track in the course. Reviewed and simplified missed lecture concepts with students to ensure their continual growth in the course.

Peer Tutor, Upward Bound-Math and Science, [Miguel Peralta, Program Director] Wesleyan University, Middletown, CT, September 2015 – December 2015. 15 total hours. Served as an online tutor as part of a pilot program created by Upward Bound to make college tutors more accessible to high school students. Communicated with a high school student via email to help her complete college admissions applications. Assisted five high school students in completing homework assignments and motivated them to apply to college.

Ongoing Projects

Goals: de-stigmatize mental illnesses, educate the public on proper health habits, and educate children about the human body.

- **Blogger** (<https://neuronergetic.wordpress.com>): Aim to provide a platform for others to share their experiences with mental health challenges. Exploring my long-term

passion for neuroscience by writing about the neuroscience behind a variety of everyday human experiences.

- **Children's Book Publisher:** Collaborating with Dr. Rebello and Nick Taylor to publish a children's book on the negative/addictive side effects of vaping.

Clinical Skills

Head-to-Toe Physical Assessment; Focused Physical Assessment; Assessment of Various Human Body Systems; Somatosensory Evoked Response Test; Train of Four; Spontaneous Electromyography; Triggered Electromyography; Transcranial Electrical Motor Evoked Response Test; Electroencephalogram; Brainstem Auditory Evoked Response Test; Visual Evoked Response Test; D-wave Monitoring; Dorsal Column Mapping; Peripheral Nerve Monitoring; Spinal Cord Stimulation; and Cortical Mapping.

Laboratory Skills

Total Internal Reflection Fluorescence Microscopy; Fluorescence Resonance Energy Transfer Imaging; Protein Expression; Yeast Two-Hybrid Screening; Site-Directed Mutagenesis; Genome-Wide Association Studies; Molecular Cloning; Gel Electrophoresis; Southern Blot; Western Blot; Northern Blot; Polymerase Chain Reaction; *In-Vitro* Cell Culture.

Computer Skills

Statistical software R; Microsoft Office; ImageJ; Galaxy; Origin; SnapGene; PyMol.

Other skills and interests

Russian (native); volleyball; weight training; yoga; arts & crafts; culinary arts & baking, journaling & meditating; blogging; reading; cross-cultural & supportive communication; compassion; problem-solving; emotional intelligence; active listening; motivational interviewing.