Important Dates

2/18 Winter 2019 Rotation Begins
2/18 Presidents Day Holiday
2/25 Recruitment Committee Applications Open
2/27 Extension Request Form Deadline
3/03 Preferences Sign Up Open
3/03 Recruitment Committee Applications Deadline
3/09 Admission Committee Applications Open
3/16 Admissions Committee Application Deadline
3/17 Preferences Sign Up Close
3/27 UCLA Spring Quarter Begins
4/01 UCLA Spring Quarter Classes Begin
4/02-4/03 Prospective Care Extender Orientations
4/07 Prospective Care Extender Orientations
4/07 RRH PEDS & PICU Child Life Training
4/9-4/10 Prospective Care Extender Interviews
4/14 Spring Department Assignments & Meeting Info Posted
4/27 CPR Training
4/29 DCA Applications Open
5/02 New CE Check in Day
5/05 Training Day and Department Meetings
5/11 DCA Applications Deadline
5/12 Last Day of Winter Rotation
5/12 Mother’s Day Holiday
According to the National Center for Educational Statistics, more than one out of every five students have reported being bullied. Furthermore, the Center for Disease Control (CDC) states that students who are both targets of bullying and engage in bullying behavior are at greater risk for both mental health and behavior problems than their peers.

Associate Professor Shawn Je and his team of researchers from the Duke-NUS School of Medicine discovered that a growth factor named brain-derived neurotrophic factor (BDNF), and its receptor, tropomyosin receptor kinase B (TrkB) affects social dominance in mice. The researchers believe that the understanding of the growth factor can help us better understand the neurobiology of aggression and bullying.

Activity within the brain is mediated by circuits made up of excitatory neurons, which ramp up activity, and GABA-ergic interneurons, which inhibit and quiet the excitatory activity.

Previous studies have shown that BDNF-TrkB signaling is important for the maturation of GABA-ergic interneurons and the development of nerve circuits in the brain. But researchers have not been able to pinpoint the behavioral consequences of disrupted DNF-TrkB signaling.

In order to better understand the signaling, Professor Je’s team generated transgenic mice in which the TrkB receptor was removed specifically in the GABAergic interneurons in the area of the brain regulating emotional and social behavior, the corticolimbic system. Through various behavioral tests they were able to learn that the mice were not being aggressive to protect their territory, but rather that the aggressive behavior seems to be a result of increased fighting for status and dominance over other mice in the group.

The behavioral consequences of impaired BDNF/TrkB signaling in GABAergic neurons provided strong evidence for a role of BDNF/TrkB signaling in inhibitory synaptic modulation and dominance in mice.
The researchers found that due to the loss of BDMF-TrkB, GABA-ergic interneurons in these transgenic mice supplied weaker inhibition to surrounding excitatory cells, which became overactive. They processed to shut down excitatory neurons in a specific area of the transgenic mice brains, which re-established the excitatory/inhibitory balance and which instantaneously reversed the abnormal social dominance.

Humans and rodents are social animals. Our every interaction follows rules according to social hierarchy. Failure to navigate this hierarchy can be detrimental. The researchers believe their paper may be the first to demonstrate that specific molecular signaling pathways in specialized nerve cells in particular locations of the brain are important for the balanced navigation of social hierarchies. Difficulties in navigating these hierarchies can lead to problems like aggression and bullying.

Through the study, Professor Je and his team were able to show that the postnatal ablation of BDNF/TrkB signaling in corticolimbic GABAergic interneurons results in social dominance by the disruption of the E/I balance in mPFC microcircuits. The deletion of BDNF/TrkB signaling from cortical inhibitory neurons exhibit social dominance and decreased inhibition within the prefrontal cortex, a key region regulating social behavior.

Reversal of the network imbalance with optogenetic inhibition could rescue the behavior. Their genetic model could be useful to dissociate and dissect underlying molecular and cellular mechanisms of aggressive behaviors and social cognition in mice. The discovery of this signaling mechanism has implications for a deeper understanding of the neurobiology of aggression and bullying.

“'A significant amount of research has focused on the roles of family and peer networks on aggressive behavior. This study can demonstrate that genetic and biological factors can play an expected role in social behaviors.”

-Shawn Je
Associate Professor of Neuroscience & Behavioural Disorders Programme at Duke NUS School of Medicine
A Word with Dr. Rana Khankan

Dr. Rana Khankan is currently a professor at University of California, Los Angeles. She currently teaches courses in the life science department. Professor Khankan has received a PhD in Molecular, Cellular, Integrative Physiology as well as a M.S and B.S. in Physiology from UCLA.

When did your journey with Care Extenders first begin?

I started as every pre-medical undergraduate student. Looking for clinical experience I decided to apply for the Care Extenders Program. I first started volunteering in the Medical Surgical Nursing unit and then eventually worked my way to volunteering in the Emergency Room and fell in love with it.

What roles have you held in the program?

After being a volunteer, I then applied to become a department coordinator and through my role as a department coordinator I began to become more involved with the trainings provided to new care extenders and really loved working alongside the individuals a part of staff. I then further advanced to the assistant program manager role where I began to have an even more of an administrative role in the program. Then my time was evenly spilt between managing the administrative aspect of the care extender program.

What have you learned from the program?

I learned a lot of skills from those roles that I have helped me in my career path. Care Extenders taught me how to work with people at different training levels. Having started with teaching people how to sign in and sign out, fill out paperwork, and giving talks during Training Day served to be my first experiences in teaching, even though I had not known I would be pursuing teaching in the future at the time. I learned skills that I used in a different way that I gained from being in a workforce environment.

How did you decide to pursue teaching?

In the middle of my masters, I decided to pursue a PhD. I moved away from wanting to apply to medical school and decided to pursue more research-based work. Throughout this time, I did volunteer through other organizations. I would volunteer for Camp Ronald McDonald for Good Times, which is a camp for kids with cancer. I then began to work with young adults and aided them in making life goals for themselves. This experience began to change my thoughts on teaching along my experience as a graduate student. As a graduate student we were required to be a teaching assistant and I began to find that I enjoyed that role. These two experiences coupled together are what drove me to pursue a PhD program. After I graduated with my PhD. I did both teaching and research. I then contacted the Life Science Core Department with my interest in teaching the course.

I had taught other courses at UCLA before such as LS 2, LS 3, and Phy Sci 13. These were all taught while conducting research. Winter quarter of 2017 was my first time teaching LS 7C. It was a different experience as the course was an active course, so I was learning with the students. In the beginning teaching the course was difficult but in my second quarter teaching it, I was hooked, and I decided to focus more on teaching. I transitioned more on teaching only and ended up leaving my post-doctoral position in August and decided to join my position teaching.
Every fall season, The Leukemia & Lymphoma Society (LLS) hosts 150 inspirational evening walking across the United States and Canada. The event is now the fifth largest peer-to-peer fundraising program in America. The event aims to bring family, friends, and coworkers together in order to celebrate, honor, or remember those touched by cancer.

The event also serves as a series of fundraising campaigns benefitting the LLS’ funding of research to find blood cancer cures. Since the founding of the organization in 1949, LLS has invested more than 1.2 billion in cancer research which has lead to breakthrough in immunotherapy, genomics and personalized medicine. LLS helped advance 34 of the 39 blood cancer treatments approved by the U.S. Food and Drug Administration (FDA) since 2017. These new treatments originally discovered for blood cancer research are now also being tested in clinical trials for other cancers. The organization also had more than 100,000 volunteer advocates across the country who have acted as a powerful voice for cancer patients and survivors to influence change at the state and federal level.

Supporters participate in the walk with their families and friends, in celebration of survivors and the strides that are being made to find cures. The Remembrance Pavilion serves as a place to honor those who have been lost as family, friends, and coworkers can leave tributes to their loved ones. The event is a heartwarming experience for all as the lighting of the lanterns serve as hope. Every participate is given a lantern. Survivors are given white lanterns, family members are given yellow lanterns and supporters are given red colored lanterns.

The Care Extender Program also contributed to the event with 124 volunteers who participated to walk and many more that assisted with registration and pre-walk pre-activities. The Care Extender Program was also able to raise $10,546 for the cause, allowing the team to be one of the highest money-raising groups from UCLA Health as well as one of the largest teams.
A major component of most graduate school applications is standardized testing. According to U.S. News the four most common graduate school admission tests are the Graduate Record Examination (GRE), Graduate Management Test (GMAT), Law School Admission Test (LSAT), and the Medical College Admission Test (MCAT). International students will have an additional standardized test requirement, as they will be required to submit scores for a test that measures their ability to communicate and write in English. These include the Test of English as a Foreign Language (TOEFL) and the International English Language Testing System (IELTS).

One of the first major steps in preparing for these exams is to figure out what is required by the graduate school one is interested in pursuing. If the GRE is a requirement, there could be additional subject-specific tests that are required.

One can then proceed to signing up for the admission tests required by the school. Scheduling is an important and expensive aspect of many graduate school admission tests. All four of the previously mentioned tests have a registration fee ranging from $100-$350. Along with the fees, the sign ups for these tests are often on a first-come-first-serve so it is beneficial to be aware of the release date and websites where sign ups occur.

Once the logistical aspects of the graduate school admission tests are taken care, it is recommended that one creates a study plan. A study plan should be created by having an honest conservation with yourself. Some questions to ponder are: How many hours can you allocate to studying every day? How much time do you have until your test date? How well would you like to score on the test? What kind of study methods would you want to incorporate during your study period?
There are a variety of resources that can aid one in creating their study plans. Multiple test preparation blogs have been created to pass down advice on study techniques that have served to be beneficial when preparing for standardized tests. Amid all the advice it is important to remain true to oneself and follow advice that one actually foresees benefitting them.

The next step is to start preparing for the exam by purchasing the corresponding text books necessary for the exam. Most major bookstores have a large college and grad school prep section. Students can also check their university’s free and for sale pages for upperclassmen that may be selling lightly used books for cheaper. Khan academy also offers a plethora of free resources for exams.

Forming a study group has shown to greatly increase retention of material. Groups can be both large and small depending on whichever size is most optimal. Having a study partner can help one keep themselves accountable to their study plan. A study partner can also help one solidify complex concepts through both learning and teaching.

Another helpful tip is to avoid burn out. It’s important to recognize the onset of burn out when one notices that they are failing to actively learn or find themselves deviating from their allocated study schedule. There are even study methods such as the Pomodoro technique that allow students to not only maximize their study time but also condition the mind to reward itself upon working hard. Scheduling a break and/or including rewards for hitting milestones are good ways to keep one’s mental health in check during the preparation period of these exams.

It is important to understand that the admission test is just one component of your application. The studying process for these tests may feel endless and daunting. It is helpful to not only keep the end goal in mind but to also enjoy the studying process as much as possible. The studying process can serve as a great experience to learn more about oneself as a student developing lifelong study habits.

Research Journals Poll

Tell us about what kind of standardized tests you are taking

Care Extender Poll

Stay tuned for the Spring Newsletter to see what kind of standardized tests your fellow Care Extenders are studying for!
Care Extenders of the Rotation

Thank you! We appreciate your service and recognize your outstanding performance and dedication to the Care Extender Program!

Ronald Reagan Medical Center

- Gonda
  - Christianne Smith
  - Danielle Gallandt
- ER A
  - Paola Ruiz
  - Leena Nabipur
  - Natalia Tulloch

Santa Monica Medical Center

- Post Partum
  - Kimberley Smart
  - Dianna Polanco
- ER-B
  - Megan McNamara
  - Daniel Sarkissian
- Orthopedics
  - Carly Clark
  - Rachel Gray
- Geriatrics
  - Lizette Silva
  - Labor and Delivery
  - Malini Gandhi
  - Victoria Pavlov
  - Greeters-A
  - Susan Park

If nominated by your Department Coordinator as Care Extender of the Rotation two or more times, you will be eligible for a letter of recommendation! 😊