How popular is tea?
In the United States alone, more than 3.6 billion gallons of tea are consumed in one year. It is found in 80% of American households and approximately 158 million people drink it every day.

What past research shows the health benefits of tea?
The antioxidants in tea have been documented in a study conducted in *The American Journal of Public Health*. The study showed a correlation between tea consumption and reduced cardiovascular diseases. Other research has shown green tea specifically linked to improved memory.

What current research shows the health benefits of tea?
According to a study published in *The Journal of Nutrition, Health, and Aging*, a link was found between the...
effects of tea intake to cognitive function. Feng Lei, a scientist from the Department of Psychological Medicine at National University of Singapore’s (NUS) Yong Loo Lin School of Medicine lead the investigation. Feng and his colleagues collected data between 2003 and 2005 from 957 participants 55 and up. The information collected asked how much tea they drank, the frequency of tea intake, and the kinds of teas they consumed. From 2006 to 2010, the researchers evaluated the cognitive performance in these individuals. The following results still remained even when the confounding variables of medical conditions, social activity, and physical activity were taken into account:

Frequent tea drinkers had 86% of a lower risk of cognitive decline; whereas, rare tea drinkers had 50% of a lower risk of cognitive decline.

Lei explained, “These compounds exhibit anti-inflammatory and antioxidant potential and other bioactive properties that may protect the brain from vascular damage and neurodegeneration” (medicalnewstoday.com). The beneficial compounds he was referring to are those in tea like catechins, L-theanine, thearubigins, and theaflavins.
How can green tea help the treatment of down syndrome?

A study published in The Lancet Neurology, revealed how a compound in green tea called, epigallocatechin gallate (EGCG) improved cognitive function in patients with down syndrome. Cognitive impairments are caused by an overexpression of a gene called DYRKA1A. However, studies have shown how the compound EGCG reduces this overexpression.

How was the experiment conducted?

Dr. Mara Dierssen had 84 down syndrome patients between the ages of 16 and 34. For 1 year, a daily dose of EGCG in decaffeinated green tea was given to one group while another group was given a placebo. Both groups did not know which condition they were given. Brain imaging and cognitive tests were done at the 3rd, 6th, 12th month, and the 6th month after the treatment ended. The results are as follows:

Those treated with EGCG had higher cognitive function and more functional connectivity between nerve cells than those treated with the placebo.

What future research should be done?

The study showed positive results in adults. However, Dr. Dierssen wonders how the treatment will work when applied in children since their brains are not completely developed yet.

Care Extender Committees

Department Coordinator Assistant (DCA) Position

DCAs must perform “sweeps” at Ronald Reagan or Santa Monica Hospital to gain feedback from staff and Care Extenders. DCA’s must also make sure Care Extenders are attending shifts and are in proper uniform.

Recruitment Committee

These leaders must spread the word about the Care Extender Program by emailing professors, visiting the school’s career center, making class announcements, etc.

Greeters Committee

Those in this committee must train incoming Care Extenders to get them more acquainted with the hospital. The tours consist of taking Care Extenders to the most visited places in the hospital.

Admissions Committee

These members must facilitate the interview and Live Scan Process by checking in applicants, taking photos, giving health requirement presentations, and answering applicants’ questions.
Interview with a Care Extender: Brandon Yoshida

Name: Brandon Yoshida

Year at UCLA: 4th year

Major: Chemistry

Did you always know you wanted to be a doctor?

No. In the beginning of first year and a little during my second year, I wasn’t sure if I wanted to be pre-med. But it was in the Care Extender Internship program where I realized that being a doctor was something I really wanted to do. A lot of pre-meds are cutthroat and I couldn’t see myself working with people like that. But I knew I shouldn’t let that get in the way of something I wanted to do.

What experience in Care Extenders lead you to know that you wanted to be a doctor?

I was in a shift in the cardiac cath lab. It was my first shift and I had never stepped into an operational room. I had not even stepped into a hospital before care extenders. Watching procedures was such a novelty. What fascinated me was the procedure itself. I remember a procedure conducted on an elderly African-American woman where doctors were going to clamp her faulty mitral valve. They fed a wire up the vena cava, across the intra atrial septum which is the wall between the right and left atria, and they placed the guide wire next to the mitral valve. They fed a mitral clamp that followed the guide wire into the left atrium node. Finally, they clamped the faulty leaflets in her mitral valve to reduce the amount of regurgitation upon ventricle contraction. I thought that was really interesting and cool! Also, they used a combination of x-ray and ultrasound to pinpoint their location in three-dimensional space.

How long did you study for the MCAT?

I started spring quarter of last year.

Are you taking a Gap Year?

No.

What is the application process like?

The application process starts with the AMCAS primary application. It opens in April and you can start submitting to schools in June. On the AMSCA, you include GPA test scores, extracurricular activities, and a personal statement of 5300 characters of why you want to attend.

(continued)
When there are low amounts of fat tissue, hence low amounts of leptin, leptin induces chemical signals in the brain to commence food intake. However, when one fasts, one doesn’t increase the amount of leptin. Low leptin levels means low chance of acute lymphoblastic leukemia (ALL).

Medical school. After the primary application is submitted, those schools may send you their secondary applications. Some schools may send you their secondary applications automatically. At the end of the day, no one knows what they look for. The secondary includes 2-3 1000 character essays or 200 words. Some secondary essay prompts include, “why are you diverse? what is the greatest challenge?, why do you want to go to this school?”. After secondary applications, then you may get invitations to interview at some schools. Interviews are usually late September to April. You can expect acceptances within a short 24 hours to a couple of months. I knew someone that applied to USC and got accepted the next day.

What schools did you apply to?
USC, Columbia, UPenn, and a couple of others. I applied to 27 on the AMCAS.

Any advice on the attitude that you had during the application process?
Don’t get psyched out. A lot of people on a lot of forums will insist that if you don’t do it one way, you won’t get accepted. However, I think that if you’re honest with yourself and apply to schools within your limits, you will find a school that is good for you. Let’s say for your undergrad, you wanted to go to CAL. Let’s say you didn’t have a good GPA. If you didn’t quite fit in there, your GPA would get murdered and it would be hard for you to be competitive. If you apply within your limits, you will find a school that you will succeed in. At the end of the day, it doesn’t matter what school you’re at. If you are honest, and put in the effort, at the end of the day, you will get out what you put in. Just do what you want. Do what you think is best. Don’t compare yourself to others.

How do you keep yourself motivated through the process?
If you do things you want to do, it is not hard to motivate yourself.

“Don’t get psyched out. A lot of people on a lot of forums will insist that if you don’t do it one way, you won’t get accepted. However, I think that if you’re honest with yourself and apply within your limits, you will find a school that is good for you.”
-Brandon

Like what you see? Email the Care Extender Newsletter Coordinator Evyn Mirasol at EMirasol@mednet.ucla.edu.

Who knows? You might even be featured in the next newsletter! 😊
“The current findings suggest that future screening for inhibitors of the selenoprotein P-LRP1 axis could identify exercise-enhancing drugs to treat physical-inactivity-associated diabetes such as type 2 diabetes” -Misu and colleagues (medicalnewstoday)

If you have ever worked out for an extended period of time, it would be because of one of two reasons: to lose weight or to look fit. You may put the same amount of hours, weeks, and months into your new gym routine alongside your friend. However, your friend seems to be showing better results than you and it doesn’t seem fair. A new study from the Kanazawa University Graduate School of Medical Sciences may have the answers to your questions. The study was published in the journal Nature Medicine and conducted by Hirofumi Misu and his colleagues. They discovered that higher levels of selenoprotein P, which is a protein secreted by the liver, is the reason for reduced exercise endurance.

**The Mice Experiment**

Scientists made a control and experimental group of mice run on the treadmill for 30 minutes per day for 1 month. One group had a lack of selenoprotein P and another group was the wild-type mice. After 1 month, the group of mice that was deficient in selenoprotein P had a larger reduction in blood glucose levels. The wildtype group had an additional administration of selenoprotein P. Exercise benefits are linked to high levels of phosphorylated AMPK enzymes; however, this group showed fewer phosphorylated AMPK enzymes.

**The Human Experiment**

31 women who do not exercise regularly were placed in an 8 week aerobic training course while their maximal oxygen intake was tracked. After 8 weeks, scientists discovered that women with more selenoprotein P had reduced oxygen intake.
The Evolutionary Development of Alzheimer’s Disease: Lecture by Molly Fox, PHD Biological Anthropologist

About 5.5 million Americans live with Alzheimer’s and about 5.3 million of them are 65 and older (Alzheimer’s Association). Early onset Alzheimer’s is less than 1% of cases which is caused by a genetic mutation. Late onset Alzheimer’s is greater than 99% of cases. Alzheimer’s is the deterioration of the brain caused by protein plaques and mostly occurs in middle or older aged individuals. There are three stages of this devastating disease.

**Mild stage**

This lasts anywhere between 2-5 years where there is an impairment of short-term memory, but the individuals still appear normal.

**Moderate Stage**

This lasts anywhere between 2-4 years. The individual is impaired when it comes to short-term and long-term memory. Mental and basic living tasks also become difficult. The individual may forget some parts of their personal history. Additionally, the individual may become moody and socially withdrawn making it difficult for him/her to function in a social community.

**Severe Stage**

(continued)
This stage develops and becomes progressively worse. The individual will forget their personal history and have delusions, suspicions. The person would depend on others for daily tasks and lose the ability to speak, walk, and swallow.

**What is the Evolutionary and Anthropology Perspective on the Development of Alzheimer’s?**

In Molly’s lecture, she really emphasized how the lifestyle of the elderly today is very different from how the elderly lived in the past.

During our hunter-gatherer days, older people were the main source of information for growing crops, politics, cultural traditions, and survival. They helped in teaching their kin hunting techniques and babysitting the young. Ethnographic literature shows how older people were needed for the survival of the family. The elders that live in hunter-gatherer groups today still play this role.

Today, she says, there are a lot of negative stereotypes about the elderly. They are viewed as a burden because of the effort it takes to care for them. Additionally, most of them are placed in a home encouraging this group to be ostracized from society.

The big evolutionary question here is: “Did the elderly in the past suffer from Alzheimer’s as well?”

Obviously, we can’t time travel, but we can find the answer to this question by observing the hunter-gatherer tribes in remote parts of the earth. Investigation has revealed that there is no trace of Alzheimer’s disease in these populations.

Therefore, Molly Claims that Alzheimer’s is a disease of civilization or a disease of affluence. This means certain diseases are of higher prevalence in the western world and are just showing up now.

This is analogous to the hygiene hypothesis where diseases of affluence such as, eczema, asthma, etc. are common in the westernized world due to excessive cleanliness. In other words, humans are not exposed to the same bacteria and parasitic worms that our ancestors lived with thousands of years ago. Therefore, our immune systems overreact and cause these conditions.

She ends the lecture by saying, “You can grow old without losing your mind. We could fight the negative stereotypes about the elderly today.” The physiological explanation for the development of Alzheimer’s is the growth of protein plaques. However, she advises us to look at the evolutionary anthropology perspective as well and emphasizes the importance of further Alzheimer’s research.
Care Extenders of the Rotation

RONALD REAGAN MEDICAL CENTER

- Ashley Nguyen
  - ER-B
- Ai Ohno
  - ER-B
- Stephanie Pham
  - ER-B
- Michelle Dela Rosa
  - ER-B
- Joseph Trainer
  - ER-B
- Julianna Remo
  - ER-B
- Minal Reddy
  - 5E
- Dulshan Jayasekera
  - 7W-CTU
- Ashley Smith
  - 7W-CTU
- Tanushree V. Mondakar
  - Gonda Observatory Unit
- Refat Ahsan
  - 8W
- Manu Dwivedi
  - ER-A
- Yessica Hernandez
  - 8N
- Shannon Lalezari
  - 8N
- Emilie Liu
  - 8N
- Jaret Nishikara
  - 8N
- Travis Sekhon
  - 8N
- Glory Thai
  - 8N
- Evelyn Valencia
  - 8N
- Davis Whiteside
  - 8N
- Rayven Zhang
  - 8N
- Rosie Saikaly
  - 8N
- Tara Ostad
  - 8N
- Melody Beral
  - 8N
- Sakina Qadir
  - 8N
- Eric Siegel
  - 8N
- Viviene Nguyen
  - 8N
- Nguyet Anh Vu
  - 8N
- Du-A Lee
  - 8N
- Aryella Moreh
  - CCL
- Miguel Mendoza
  - CCL
- Christopher Ansay
  - 8E
- Alan Vander Maas
  - MICU
- Hasmik Nazaryan
  - MICU

SANTA MONICA MEDICAL CENTER

- Kelly Nakamura
  - Labor and Delivery
- Sara Hill
  - Oncology

If nominated by your Department Coordinator as Care Extender of the Rotation, you will be eligible for a letter of recommendation! 😊
The Inside Scope: Care Extender Internship Program

Important Dates

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5/1  Spring Rotation Begins
7/23  Training Day and Department Meetings
7/30  Last Day of Rotation

JUNE

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