Dear Study Member,

I am writing again to thank you for participating in the California Teachers Study. Since 1995, the California Teachers Study has become a national leader in understanding the causes of breast cancer and other health conditions among women. I hope you enjoy our 13th newsletter. This one describes two of our most recent research efforts. We are excited that the California Teachers Study continues to address important scientific, yet practical health questions facing women.

Last year we sent the 2012-2013 questionnaire to all of you to learn more about how to prevent breast and other cancers. I want to thank all of you who have already returned this survey. You are contributing to one of the most important research studies on cancer prevention and control that is being conducted in the United States today.

Our team of scientists has worked together for nearly 20 years to help make the California Teachers Study the premier study that it is. You are the most important part of the team. Without you and your continuing participation in this study we would not be able to continue working toward our ultimate goal of preventing cancer.

On behalf of all of us, thank you so much for your continued participation and your support of the California Teachers Study.

Sincerely,

Leslie Bernstein, PhD
and the CTS research team

By selecting this e-version of our newsletter, you are saving the CTS printing and mailing costs.
WE ARE EXCITED TO ANNOUNCE A NEW PROJECT within the California Teachers Study (CTS). New research is looking for information in blood samples that can help to detect cancer earlier and predict who may be at higher or lower risk of developing cancer. We are inviting approximately 30,000 CTS participants to donate a small blood sample that we will use for future research. The goal of this new project is to one day combine information from these new blood samples with the health and lifestyle information previously provided by CTS participants’ questionnaire responses. This could lead to new ways to detect cancer earlier, to predict who may be at higher or lower risk of developing cancer, and to fight and prevent cancer and other diseases that affect women. A small blood donation today can lead to big discoveries in the future.

Here are answers to some questions you may have about this study:

Why are you asking for blood samples?
Blood samples are precious for research because they contain lots of clues about cancer and other diseases.

These clues, which are called “biomarkers,” can be genetic markers, or they can be the levels of the proteins and hormones that circulate in the blood. New research is trying to identify the biomarkers that can be used to detect cancer and other diseases at the very earliest stages. Early detection gives cancer patients the best chances for effective treatment. Collecting blood samples today will enable the CTS to conduct future tests of new biomarkers to determine how they interact with other factors that affect a woman’s risk of developing cancer.

What if I want to participate but I can’t or don’t want to provide a blood sample?
We certainly understand that some of you do not like to have your blood drawn. Some of you might not be able to provide a blood sample. Although a blood sample is preferred, you can provide a saliva sample instead. We’ll make it as easy as possible for you. We’ll send you a collection kit with detailed instructions and a pre-paid return envelope for mailing the saliva sample back to us. You can collect the saliva in the comfort of your own home.

What will you do with these blood and saliva samples?
Between now and August 2016, we will collect as many blood and saliva samples as we possibly can. Some of the cancers and other diseases that we will study are rare, and the only way to study those rare conditions is to have samples from as many participants as possible. Every single one of you counts, so we hope that all of you who are invited to participate will agree to take part in this project. After we collect the samples, we will put them in locked, secure freezers and carefully store them for use in the years ahead. When

THANK YOU FOR YOUR CONTINUED SUPPORT!
it is time to test a new biomarker or look for a new discovery, we will carefully select the groups of samples that will be tested and then take them out of the freezers for testing. We plan to start using the samples in 2016 or 2017, so right now it is impossible to list all of the specific research tests that will be conducted on these samples. For example, if a new test for breast cancer is discovered in 2018, then that is something that we would be able to test in the future.

**What about the privacy and confidentiality of these blood and saliva samples?**

This is one of the most important parts of the CTS overall and of this new project. We protect your privacy and confidentiality in many ways:

- We never sell or give away any of the information you have given us as part of the CTS. We will never sell it or give it away in the future.
- We use the CTS data you have provided to us only for research purposes, and we only use your identifying information—your name, your address, your phone number—when we need to contact you about the study or send you study materials, such as this newsletter.
- We use special study codes and labels on the blood and saliva samples so that no one else besides us will know which blood or saliva sample came from you. When we test those blood or saliva samples, the samples are only identified by those special codes. When we report the results of our research in scientific papers or at scientific meetings, we always report the results at the group level, which means you will never be identified by name.

**How can I get involved?**

If you are under age 75 and have not previously provided a blood sample or saliva sample to the CTS, then you could be invited to participate. Our study team will be contacting many of you between now and 2016. Participants from all across California will be invited to provide a blood or saliva sample. If you are interested in participating, then please contact the CTS Study Center nearest you:

- If you live in the Los Angeles, Ventura, Santa Barbara, or San Bernardino areas, please contact Ms. Jennifer Press at jpress@coh.org or 626-256-4673, ext. 33731.
- If you live in northern or central California, please contact Ms. Christine Duffy at Christine.Duffy@cpic.org or 510-608-5032.
- If you live in Orange, Riverside, San Diego, or Imperial counties, please contact Ms. Patricia Hall at hallp@uci.edu or 949-824-1240.

This new project is being lead by Dr. James Lacey at City of Hope and is being funded by a 4-year, $9.8 million dollar grant from the National Cancer Institute and the National Institute of Environmental Health Sciences. Dr. Lacey recognizes what a unique opportunity this is to build on the success of the CTS. “People know that the California Teachers Study has collected first-class data from these great participants over the years,” he says. “Our entire study team is excited to have this opportunity to invite the Teachers Study participants to be part of this project. We’ll do everything we can to make sure that it is a good experience for each and every participant.”

You can find more information on our “New Biospecimens” project, and meet some of our study team members at www.CalTeachersStudy.org. If you have questions about this or any other part of the California Teachers Study, you can contact us anytime. We would love to hear from you. ✩
As treatment for many cancers has become more successful, some women are frustrated by a sensation of "foggy thinking," sometimes making it difficult to remember things and plan daily activities. For some, writing becomes challenging and even finding the right words when speaking can be difficult.

Patients frequently joke about these symptoms as "chemo brain" because they are widely thought to be a result of chemotherapy effects on the brain. Doctors and researchers call it "mild cognitive impairment." Fortunately, for most people, the effects only last a short time but others have long-term symptoms. In recent years, patients and researchers are realizing that other factors probably contribute toward these effects. In particular, patients with breast cancer express concern about the potential cognitive side effects associated with endocrine therapies such as hormone blockers. Recent research suggests that combining chemotherapy with endocrine therapy is associated with greater cognitive function side effects than chemotherapy alone. However, this research has been mostly done in the two years following diagnosis, so little is known about the long-term effects.

To address these concerns, the CTS applied to the California Breast Cancer Research Program for some research support. Led by Sunita Patel, PhD at City of Hope, this proposal was quickly approved for funding; Eunjung Lee, PhD at USC will also be a leader of this study.

We will ask selected CTS volunteers to participate in neurocognitive testing. One group will contain women who were diagnosed with breast cancer at least five years ago and a comparison group will contain women without a history of cancer. In addition, we will also look back at the information that was provided in the 1995, 2000, and 2005 surveys.

The main purpose of this study will be to look for risk factors for "chemo brain," in hopes that it can be prevented in the future. Questions that we will answer include:

- Do women treated for breast cancer with both chemotherapy and hormone therapy have different cognitive functioning than similar women without a history of cancer?
- Does having other health conditions, such as diabetes or hypertension, increase the risk for cognitive issues following breast cancer?
- What kinds of lifestyle factors may be associated with better cognitive functioning following breast cancer?