

News from the

# Tissue Donation Program

Fall 2013

## Dear TDP Participant,

We hope our newsletter finds you well. We are happy to report that the TDP continues to expand and thrive, resulting directly from the committed and enthusiastic participants in our many and varied studies. In this newsletter we highlight recent research findings from TDP studies of breast cancer and autoimmune diseases such as lupus and rheumatoid arthritis, research that you have made possible.

We always welcome opportunities to share information about our studies in the community. We've enjoyed meeting new participants at Dowling College, North Country Reform Temple in Glen Cove, the Farmingdale Community Summit and the Manhasset Men's Club among others.

At The Feinstein Institute we believe collaboration among creative thinkers who share a singular focus of advancing science to prevent disease and cure patients will lead to pioneering discoveries. To date, more than 6,000 TDP participants are part of this collaborative team. Thank you for your contributions to our studies.

Sincerely,  
Peter K. Gregersen, MD &  
Christine Metz, PhD

## KUDOS

We are very pleased to share the news of recent honors received by our Principal Investigators – Peter K. Gregersen, MD and Christine Metz, PhD.

Dr. Gregersen was honored by The Royal Swedish Academy of Science with The Crafoord Prize for his research in understanding the genetic and molecular basis of rheumatoid arthritis. He shares this year's honor with two colleagues, Lars Klareskog, MD from the Karolinska Institute in Stockholm and Robert Winchester, MD from Columbia University in New York.

Dr. Christine Metz received The Lorinda de Roulet Award for Excellence in Research from Katz Women's Hospital in the NS-LIJ Health System.



*Dr. Peter K. Gregersen receiving the Crafoord Award from King of Sweden Carl XVI Gustaf*

## Did you know...

Thanksgiving is National Family History Day. As families gather, it is a great time to talk about, and write down the health problems that seem to run in families. Learning about your family's health history and sharing it with your doctor, may help ensure a healthier future together.

## Understanding Micro RNA in Breast Cancer

Dr. Iuliana Shapira, director of Cancer Genetics Program at the NS-LIJ Cancer Institute, recently presented results from a study she collaborated on with Annette Lee, PhD, director of Laboratory of Translational Genetics, with implications for understanding the differences in outcomes between African-American and Caucasian women with breast cancer. Although breast cancer is more common in Caucasian women, African-American women often have more aggressive disease and poorer outcomes.

To explore why this is so, they studied blood samples from women in the TDP's Breast and Ovarian

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## Immune System Detectives

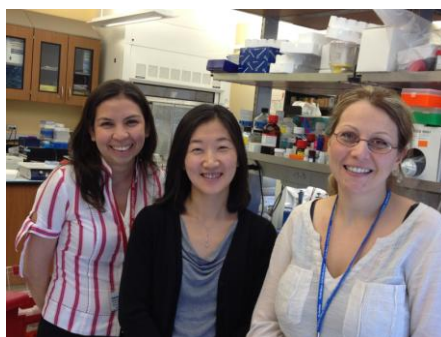
The human immune system plays a crucial role in keeping us healthy. It works around the clock in thousands of different ways, but it does its work largely unnoticed. However, if our immune system fails we certainly take notice. Even when it is working properly we can often see or feel it at work -- for example fever and inflammation are signs our immune system is doing its job.

Three scientists at the Feinstein have been studying a few of the thousands of different ways the immune system works. All three (pictured right) have utilized the Genotype and Phenotype Registry (GAP) for their research.

Dr. Sun Jung Kim's recent work uncovered a novel function for a gene called Blimp1. Rather common genetic variants of Blimp1 have been associated with risk for lupus and inflammatory bowel disease. Through the GAP Registry she was able to find participants that carry the variants in Blimp1 needed for her studies. By studying blood samples from these individuals she showed that these genetic variants act through dendritic cells, a key regulatory cell for the immune response. This critical new finding moves the scientific community one step closer to new and improved treatments for diseases such as lupus or inflammatory bowel disease.

Drs. Nataly Manjarrez-Orduno and Kim Simpfordorfer have had

similar success investigating other important pathways in the human immune system by studying blood cells obtained from GAP participants. To see the publications describing each scientist's research, please go to our website [www.gapregistry.org](http://www.gapregistry.org)



*Dr. Manjarrez-Orduno, Dr. Kim and Dr. Simpfordorfer (left to right)*

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Cancer Specimen Bank. Specifically they looked at the microRNA profiles of women with and without breast cancer, of whom half were African-American and half Caucasian. MicroRNAs are small genetic molecules found in all cells that regulate gene activity.

The study revealed that there were striking differences in the profiles of microRNA expression between the two ethnic groups. "Breast cancer patients who have the most devastating outcomes may carry the microRNAs that promote cancer," explained Dr. Shapira. "Our studies are geared to identify markers of

'good outcomes' and 'poor outcomes' and to personalize therapies based on the markers. We are continuing our study to identify which microRNAs are protective against cancer, where they originate and how to increase their levels. Methods to increase microRNAs in the blood before surgery, such as giving chemotherapy before surgery for cancer, may improve survival rates in sub-groups of women with triple negative breast cancer with markers of poor outcomes," she said.

Dr. Shapira (below, right) and Dr. Lee (below, left) continue to work on understanding the role microRNAs play in breast cancer, as well as ovarian cancer. Their work would not be possible without the support and critical contribution of samples and time from each and every participant in the Breast and Ovarian Specimen Bank.



The Feinstein Institute for Medical Research Tissue Donation Program  
Peter K. Gregersen, MD • Christine Metz, PhD •  
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In the future we plan to send our newsletter via email. To assure you will continue to receive it please contact us at [ResearchRegistry@nshs.edu](mailto:ResearchRegistry@nshs.edu) to confirm we have your correct email.