

How Your Dollars Help Research at the Fox Chase Cancer Center

2016 May in Versailles Event to Support Immunotherapy Research

The Bucks County Chapter of the Board of Associates, Fox Chase Cancer Center, is pleased to announce that at our *May in Versailles* event, we will be holding a special pledge auction in support of immunotherapy research at Fox Chase Cancer Center.

The immune system is a collection of white blood cells that protect us from all manner of invading pathogens, such as viruses and bacteria. In addition, the incredible power of the immune system to recognize anything out of place in our bodies is emerging as an exciting new approach for cancer treatment. Immune cells have been shown to be effective adversaries for such difficult to treat cancers as melanoma and lung cancer. Along with their incredible efficacy, immune therapies have the added benefit of having far fewer side effects. Indeed, unlike chemotherapy, which is toxic to cancer, but also damages normal tissues, the destructive power of immune therapies is far more focused on the cancer cells themselves. Nevertheless, while there is much promise surrounding the use of immune therapies, there is much work left to do. Immune therapies induce long-lasting cancer remissions, but unfortunately, this is true for only a minority of patients. Accordingly, resources are required to research ways to identify those patients that will benefit from current immunotherapies, as well as to devise new and more powerful ways to modulate the immune system so that patients that are currently not benefitting can also receive the life-saving benefits of this most promising therapeutic approach. Fox Chase researchers are hard at work, having identified subsets of immune cells that appear to predict how a patient will react to immune therapy. Moreover, having potentially identified a way to spot patients that are unlikely to respond, Fox Chase researchers are now determining how to optimize immune therapies so they will benefit patients that were previously unresponsive.

For your information, the Special Pledge at last year's fundraising event, May in Maui, was devoted to lung cancer research, which is responsible for 1 of every 5 cancer deaths. The funds raised last year advanced research on two fronts. First, Dr. Clapper was able to determine that the unique hormonal environment in women's lungs increase their cancer risk and make them particularly vulnerable to the destructive effects of cigarette smoke, even mild exposure to second-hand smoke. Second, Drs. Bumber and Borgaei were able to identify a novel treatment strategy involving a Trojan horse of sorts. They target a lethal compound to lung cancer cells by attaching it to a chemical that binds a critical component that is over-represented in lung cancer cells. The unsuspecting lung cancer cells engulf this chemical complex, presuming it to be harmless, but once inside it delivers its deadly payload, decimating the tumor.