

CCBF Laboratories

Cancer Research Breakthrough

Dr. David Lyden Discovers that a New DNA Test Could Lead to Earlier, Easier Cancer Diagnoses

CCBF Physician-Scientist, Dr. David Lyden along with a team of researchers from Weill Cornell Medical College, Memorial Sloan-Kettering Cancer Center, the Icahn School of Medicine at Mount Sinai, Cold Spring Harbor Laboratory, and Hannover Medical School in Hannover, Germany have demonstrated that DNA fragments packaged in tumor exosomes – small tumor-secreted vesicles – can be used to identify important genetic mutations in cancer. Since exosomes circulate in the blood, the discovery suggests that physicians could eventually use a blood test to detect tumors and to monitor patients' response to treatments.

The findings recently published in the Nature Publishing Group journal Cell Research, show that exosomes contain double-stranded DNA, and this double-stranded DNA represents the entire genome of the cancerous tumor from which it originated. The study

demonstrated that DNA associated with exosomes reflects the mutational status of their donor cells. This finding suggests the highly promising translational potential for exosomes, which can be obtained from a simple blood test.

The researchers also plan to study how exosomes introduce their cancerous DNA into healthy cells to better understand how cancer spreads throughout the body. The finding builds on earlier work by Dr. David Lyden and his team who were the first to show that exosomes released by tumors can transport cancer-promoting proteins through the blood stream and negatively affect healthy cells at distant sites. Importantly, the researchers demonstrated that the protein cargo of cancer exosomes could predict cancer

spread in patients with aggressive skin cancers.



This work has been done over the past five years in Dr. Lyden's laboratory. Studies showed that DNA can be associated with exosomes in two forms: it can be contained within the exosome particles or it can be attached to the surface of exosomes, which may have distinct roles for cancer diagnosis.

The lab is working on improved ways to collect circulating exosomes. Dr. Lyden said, "In the near future, optimizing methods used to isolate DNA contained within exosomes will lead to improvements in the sensitivity and specificity of detecting exosomal DNA alterations that will prove useful in the clinical setting".

CCBF Events

Young Professionals Fundraiser at Morton's Steakhouse

On Tuesday, May 20th, CCBF hosted a Young Professionals fundraiser at Morton's Steakhouse, located in the heart of midtown Manhattan. Guests enjoyed a delicious three-course meal, drinks and the opportunity to meet and greet with CCBF scientists and

physicians, including Chief of the Division, Dr. Sujit Sheth.

Thanks to the generosity of PromoLogics Inc.'s donation of the venue, meal and beverages, 100% of the evening's proceeds benefitted CCBF. The event was a

huge success as it raised awareness, engaged CCBF's young professional supporters and raised funds for the Division of Pediatric Hematology/Oncology at New York Presbyterian Hospital/Weill Cornell Medical Center.

CCBF Events

CCBF's Contemporary Art Auction

On Wednesday, June 18th CCBF hosted its 7th Annual Contemporary Art Auction at Phillips in New York City. The exclusive evening provided CCBF supporters the unique opportunity to browse and bid on CCBF's diverse collection of paintings, photographs and sculptures over hors d'oeuvres and cocktails at the renowned auction house.

Art featured in the 2014 auction included works by Richard Serra, Jasper Johns, Peter Halley, Richard Pettibone, Zhang Huan, and Massimo Vitali among others.

The tremendous support CCBF received from this annual event has made it one of

our most successful fundraisers, each year raising significant funds for children with cancer and blood disorders. Proceeds from this event directly support the Division of Pediatric Hematology and Oncology.



CCBF Update

Clinic Renovation Project

Decades of care, changes in technology, evolution of delivery systems and a focus on the quality of life issues for pediatric patients led the Hospital to commit to the total renovation and modernization of the Division of Pediatric Hematology/Oncology.

The entire project, which cost \$4.8 million and began in the fall of 2013, finished on schedule this summer. This month, the renovated clinic opened its doors to feature a new and improved waiting room, modernized conference and academic space, and state-of-the-art treatment bays.



A major priority of the project was to update and modernize treatment areas for patients. Each treatment area and exam room in the new Pediatric Treatment Center has been enhanced to make patients and their families more comfortable while receiving care. The creation of seven semi-private treatment bays affords privacy and room for two visitors as well as new technology options for

entertainment. CCBF would like to thank Ron Iervolino and the Sy Syms Foundation for donating three of the seven treatment bays.

In addition to the new treatment bays, the clinical suite now includes five examination rooms, a staff lounge, a phlebotomy room, a private examination/infusion room, and a nursing station. The modernized clinic features an updated academic corridor which houses three physician offices, staff work stations, a large state-of-the-art conference room and a microscopy area. The project concluded with the completion of the new family waiting area which features a unique child-friendly design, modern play areas and increased seating capacity.

The renovation project has transformed an aging and time-worn facility into a modern, comforting and child-centric treatment center. Patients can now receive the best care possible while maintaining their privacy, and enjoying the comforts of today's technological advances.

Learn More

Learn How You Can Make a Difference

General Support

Your generous gift will help CCBF continue to offer quality care and remain a pioneer of pediatric oncology and hematology research.

Memorial and Tribute Gifts

These gifts allow you to make a donation in the name of a loved one.

Matching Gifts

Your gift could be doubled or even tripled! Check with your HR office to see how your company can match gifts.

Volunteer

CCBF is always looking for dedicated people to help in our fundraising efforts. Share in this rewarding experience.

Other Ways to Help

There are other ways to help, such as planned giving and gifts of stock. Ask us about other ways to donate!



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