Biography

Mignon Lee-Cheun Loh, MD

Educated at Bryn Mawr College, Dr. Loh graduated cum laude with a major in art history prior to entering medical school at Columbia University of College of Physicians and Surgeons. She was recruited to UCSF in 1999 after completing her residency and fellowship training at Harvard Medical School, and was promoted to associate professor of clinical pediatrics in 2007 and to full professor in 2011. Dr. Loh is nationally and internationally recognized for her expertise and novel contributions in two childhood blood cancers: acute lymphoblastic leukemia (ALL) and juvenile myelomonocytic leukemia (JMML).

Dr. Loh currently serves as vice chair of biology for the ALL committee of the Children's Oncology Group (COG). She has served as study co-chair for AALL03B1, which is the classification of acute lymphoblastic leukemia trial for the COG, and represents the largest risk stratification trial in the history of pediatric leukemia research, having enrolled over 11,000 children diagnosed with ALL since 2004. Together with her co-chair, Dr. Loh reviews the clinical features of each child enrolled at diagnosis, leukemia genetics, and early response to therapy, and renders a risk assignment at the end of induction in order to ensure that children receive appropriately intensive therapy. The large number of banked samples acquired from these patients at diagnosis has provided additional rich resources for Dr. Loh and her colleagues to analyze for additional

abnormalities that will provide new insights into the causes of this most common cancer of childhood. She coordinates a large number of these studies and is widely recognized for her ability to promote productive and accurate high profile collaborations in the leukemia community. For instance, together with the chair of the ALL committee, Dr. Stephen Hunger, Dr. Loh assembled a group of senior investigators that successfully applied for a two-year Grand Opportunity grant, which was part of the American Recovery and Reinvestment Act passed by President Obama in 2009.

Dr. Loh also conducts laboratory research and has made seminal contributions to unraveling the genetics of a deadly leukemia, juvenile myelomonocytic leukemia. Though this is a relatively rare disease, it is nonetheless nearly universally fatal unless these young patients receive a bone marrow transplant. Dr. Loh has identified at least two new genes that are mutated in this disorder, with the most recent discovery extending beyond JMML. The recent discovery of inherited mutations in a gene called CBL that predisposes families and affected children to developmental phenotypes (learning delay, hearing loss, poor growth) as well as cancer, are a breakthrough in human disease. This observation was initiated through old-fashioned detective work and a passion for listening to what patients "tell" us, either through their symptoms or words or family histories with the "a-ha" moment being realized through harnessing sophisticated genomic technologies on a simple set of blood samples. Dr. Loh has published many papers in collaboration with international investigators and has served on the board of directors of a family advocacy group, the JMML Foundation. Dr. Loh is also interested in how the genetic alterations described in this disorder lead to faulty wiring within cancer cells, and her laboratory has developed a keen expertise in harnessing the latest technology, phosphoflow cytometry, to answer these questions.

Loh Abstract

Dr. Loh will discuss her work as a laboratory investigator as well as the Children's Oncology Group Acute Lymphoblastic Leukemia Committee Chair to translate patient oriented, laboratory based observations into rational clinical trials.