T.J. Martell Foundation
Music's Promise for Curing Cancer

Notable Achievements in Research

- **Psychological Oncology Research at Memorial Sloan Kettering Cancer Center** Neuropsycho-oncology investigators funded by the T.J. Martell Foundation at Memorial Sloan Kettering have discovered the gene that predisposes breast cancer patients to develop "chemo brain" and have begun to develop a better understanding of the brain changes that occur and interventions to enhance attention and memory in patients on chemotherapy. Our Psychotherapy researchers have developed novel, effective counseling interventions to reduce fear of recurrence in breast cancer patients, and reduce distress in cancer caregivers.

- **Breast Cancer Research at Vanderbilt-Ingram Cancer Center** The T.J. Martell Foundation's support for deep analyses of triple negative breast cancer patients' tumors at Vanderbilt-Ingram Cancer Center is enabling more rapid advancement of preclinical data from the bench to the clinic and thus, alignment of patients to less toxic targeted therapies.

- **Neuroblastoma Research at Children's Hospital Los Angeles** Neuroblastoma, a deadly form of cancer attacking young children, had a survival rate of less than 15%. For over 25 years, the T.J. Martell Foundation has supported research in this field at Children's Hospital Los Angeles and now the cure rate is 45%. We continue to fund this effort with the expectation that we will soon have a 100% cure rate. The Pediatric Phase I and II Clinical Trials Consortia Headquartered at CHLA has provided preclinical data for development of a clinical protocol for children with relapsed neuroblastoma and allowed this research team to develop novel new approaches to neuroblastoma therapy.

- **Bladder Cancer Research at Columbia University** Our supported bladder cancer research at Columbia University has led to new understanding on the origin of bladder cancer and why some cancers behave so much more aggressive than others.

- **Prostate Cancer Research at Columbia University** Our prostate cancer research team at Columbia University has developed novel techniques that allow us to use drug perturbation data from genetically engineered mouse models to predict drug efficacy in human cancer.

- **Leukemia Research at Winship Cancer Institute** Cancer cells are known to accumulate copper ions compared to normal cells. In addition, cancer patients with elevated serum copper levels show resistance to chemotherapies in clinic. Our leukemia research at Winship Cancer Institute is based on a new idea to block "copper trafficking" in cancer cells, which prevents copper transfer from copper-bound trafficking proteins to copper-dependent proteins.

- **Lung Cancer Research at The University of Texas MD Anderson Cancer Center** Lung cancer investigators funded by the T.J. Martell Foundation at MD Anderson have discovered for the first time that the immune cell populations in different regions within the same tumors are different, a phenomena termed as immune intra-tumor heterogeneity and the extent of immune intra-tumor heterogeneity is associated with risks of lung cancer recurrence after surgery, therefore, suggested different treatment strategy is needed for different patients.

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