



Break Through Cancer Launches Two TeamLabs Targeting Acute Myelogenous Leukemia (AML)

Novel research program embracing radical collaboration to discover potential AML treatments

(CAMBRIDGE, MASS.) MAY 16, 2023 – Break Through Cancer, a collaborative medical research organization empowering researchers and physicians from top cancer research institutions to intercept and find cures for several of the world’s deadliest cancers, is announcing the launch of the *Targeting Clonal Hematopoiesis to Prevent AML TeamLab* and the *Eradicating Minimal Residual Disease in AML TeamLab*.

AML begins in the blood-forming cells of the bone marrow and rapidly moves into the bloodstream, where it can quickly spread within the body to the lymph nodes, liver, spleen, central nervous system, and testicles. AML accounts for 1% of all cancers and has a five-year survival rate of less than 30%.

Break Through Cancer TeamLabs look beyond conventional therapies, utilizing new strategies, structures, and thinking from across disciplines. They are enabled by real-time data and discovery sharing, a trust and willingness to share and critique each other’s ideas, and an urgent focus on discoveries and patient benefit.

“The TeamLabs approach that Break Through Cancer is pioneering promises ‘radical collaboration’ for cancer treatment discovery while affording unprecedented synergies among our dispersed scientific teams,” said Tyler Jacks, Ph.D., President of Break Through Cancer. Dr. Jacks is also a David H. Koch Professor of Biology at the Massachusetts Institute of Technology (MIT) and the Founding Director of the David H. Koch Institute for Integrative Cancer Research.

Dr. Jacks noted that researchers and physicians participating in the *Eradicating Minimal Residual Disease in AML TeamLab* and the *Targeting Clonal Hematopoiesis to Prevent AML TeamLab* are at the forefront of AML basic, translational, and clinical science in AML.

“Ultimately, our TeamLab will identify new molecular targets for treatment strategies that we hope will prevent the development and recurrence of AML,” said Dr. Jacks.

About the *Targeting Clonal Hematopoiesis to Prevent AML TeamLab*

This TeamLab project intends to create a new paradigm for AML management related to the detection of clonal hematopoiesis (CH), a precursor to AML development: one based on

identifying individuals at greatest risk of developing the disease and on creating strategies for early detection and AML prevention.

The project's research team hypothesizes that if scientists can develop ways to halt the expansion of—or even eradicate—pre-malignant clones, then AML risk could be significantly reduced. The project seeks to address hurdles related to their hypothesis by expeditiously identifying novel vulnerabilities created by factors such as CH cells' genomic alterations, micro-environmental interactions, and immunologic signals. The researchers will then use novel lab models of human CH cells to target these vulnerabilities with potential therapeutic interventions intended to prevent AML; they will leverage the clinical resources of four CH-focused clinical centers to build an effective cohort of patients to participate in powerful clinical trials.

About the *Eradicating Minimal Residual Disease in AML TeamLab*

This ambitious TeamLab project explores the biological mechanisms underlying residual AML that remains after first-line treatment, seeking to identify targets for treatment strategies to keep the disease from returning.

The project's research team will apply cutting-edge molecular and cell biology techniques to redefine and recast the view of residual disease in AML. The researchers intend to develop a more complete understanding of the biology of persistent residual disease and its ability to evade chemotherapy and immune clearance. That new scientific knowledge will then be used to develop novel therapeutic agents and combinations, and simultaneously, the researchers will establish a clinical framework for innovative clinical trials of promising new treatments targeting these newly revealed vulnerabilities in residual AML cells.

###

About *Break Through Cancer*

Founded in 2021, *Break Through Cancer* empowers outstanding researchers and physicians to both intercept and find cures for several of the deadliest cancers by stimulating radical collaboration among outstanding cancer research institutions, including Dana-Farber Cancer Institute, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Memorial Sloan Kettering Cancer Center, MIT's Koch Institute for Integrative Cancer Research, and The University of Texas MD Anderson Cancer Center. *Break Through Cancer* is looking beyond conventional therapies, utilizing new strategies, structures, and thinking from across disciplines to accelerate the pace of discovery.

Break Through Cancer is led by Tyler Jacks, Ph.D., founding director of MIT's Koch Institute for Integrative Cancer Research and the David H. Koch (1962) Professor of Biology. The Foundation is supported by a board that includes leaders from each of the five *Break Through Cancer* partner institutions and a Scientific Advisory Board of cancer experts from around the country. The Foundation was launched with an extraordinary challenge pledge of \$250 million from Mr. and Mrs. William H. Goodwin, Jr. and their family, and the estate of William Hunter Goodwin III. However, this is a fraction of the funding and resources needed

to solve the complex problems the cancer community faces. We will need support and creative minds from across the public and private ecosystems to make this happen. We are just getting started. breakthroughcancer.org, [LinkedIn](#), [Twitter](#)