

Leslie S. Kean, MD, PhD Professor of Pediatrics Harvard Medical School

Leslie S. Kean, MD, PhD, is the Stranahan Professor of Pediatrics at Harvard Medical School and the Director of the Pediatric Stem Cell Transplant Program at Boston Children's Hospital/Dana-Farber Cancer Institute. Dr. Kean's research program is focused on the immunology of hematopoietic stem cell transplantation, tolerance-induction for solid organ transplantation through cellular therapeutics, and immune tolerance in allo- and auto-immune diseases. The overarching goal of her research is to understand mechanisms underlying immune tolerance, with a specific focus on graft-versus-host disease (GvHD), mixed-chimerism induction for solid organ transplantation, transplant rejection, the immunology of GI autoimmune diseases, and the reconstitution of protective immunity after transplantation. Dr. Kean's work has led to the creation of multiple novel, MHC-defined non-human primate models of both engraftment and GvHD, to several first-in-disease clinical trials, and to the recent FDA approval of abatacept for GVHD prevention, which represents the first FDA approval for this indication. She has used both the animal models and the mechanistic studies linked to her clinical trials to investigate the cellular and molecular mechanisms of immune reconstitution, GvHD, transplant rejection and Inflammatory Bowel Disease, and to test the impact that novel conditioning strategies and immunomodulatory therapies can make on these processes. To accomplish these research goals, Dr. Kean employs state-of-the single-cell transcriptomic and computational methodologies to interrogate complex immunologic diseases at the molecular level.