

M.D./Ph.D. Seminar Series

Tuesday, October 29, 2013

650 Albany Street, X-714

5:00 – 6:00 PM



George Q. Daley, M.D., Ph.D. is the Samuel E. Lux IV Professor of Hematology/Oncology and Director of the Stem Cell Transplantation Program at Children's Hospital Boston. He is also Professor of Biological Chemistry and Molecular Pharmacology and Pediatrics at Harvard Medical School, an investigator of the Howard Hughes Medical Institute, Associate Director of Children's Stem Cell Program, founding member of the Executive Committee of the Harvard Stem Cell Institute, and past-President and current Clerk of the International Society for Stem Cell Research. Dr. Daley seeks to translate insights in stem cell biology into improved therapies for genetic and malignant diseases. Important research contributions from his laboratory include the creation of customized stem cells to treat genetic immune deficiency in a mouse model (together with Rudolf Jaenisch), the differentiation of germ cells from embryonic stem cells (cited as a "Top Ten Breakthrough" by Science magazine in 2003), and the generation of disease-specific pluripotent stem cells by direct reprogramming of human fibroblasts (cited as "Breakthrough of the Year" in Science magazine in 2008). As a graduate student working with Nobelist Dr. David Baltimore, Dr. Daley demonstrated that the BCR/ABL oncogene induces chronic myeloid leukemia (CML) in a mouse model, which validated BCR/ABL as a target for drug blockade and encouraged the development of imatinib (GleevecTM; Novartis), a revolutionary magic-bullet chemotherapy that induces remissions in virtually every CML patient. Dr. Daley's recent studies have clarified mechanisms of Gleevec resistance and informed novel combination chemotherapeutic regimens.

Dr. Daley received his bachelor's degree *magna cum laude* from Harvard University (1982), a Ph.D. in biology from MIT (1989), and the M.D. from Harvard Medical School, where he was only the twelfth individual in the school's history to be awarded the degree *summa cum laude* (1991). He served as Chief Resident in Internal Medicine at the Massachusetts General Hospital (94-95) and is currently a staff physician in Hematology/Oncology at the Children's Hospital and the Dana Farber Cancer Institute. He has been elected to the Institute of Medicine of the National Academy of Sciences, the American Society for Clinical Investigation, the American Association of Physicians, and the American Pediatric Societies, and is a fellow of the American Academy of Arts and Sciences and the American Association for the Advancement of Science. Dr. Daley was an inaugural winner of the NIH Director's Pioneer Award for highly innovative research and has received the Judson Daland Prize from the American Philosophical Society for achievement in patient-oriented research, the E. Mead Johnson Award from the American Pediatric Society for contributions to stem cell research, and the E. Donnell Thomas Prize of the American Society for Hematology for advances in human induced pluripotent stem cells.