Upcoming Discovery Lecture:

BRIAN KOBILKA, M.D.

Nobel Prize Winner in Chemistry, 2012; Hélène Irwin Fagan Chair in Cardiology, Professor of Molecular & Cellular Physiology, and Professor (by courtesy) of Chemical and Systems Biology, Stanford University

Member, HHMI

April 5, 2018
208 Light Hall / 4:00 P.M.
SYNERGISTIC INNATE AND ADAPTIVE CANCER IMMUNOTHERAPY

Harnessing the immune system to attack cancer has started a revolution in oncology. The ability of the adaptive immune system to track such evolving pathologies has provided robust responses and cures in 10-25% of previously intractable cancers such as metastatic melanoma. The next frontier is to “raise the tail” of the survival curve in such cancers by finding synergistic combination therapies. Chemical and biological engineers have pioneered approaches that are well suited to such investigations, bringing quantitative problem-solving synthetic and analytical toolkits to bear. Examples will be provided where cocktails of anti-tumor antibodies and cytokines have accomplished highly safe and efficacious therapies as tested in mouse models of cancer.

Professor K. Dane Wittrup is the Carbon P. Dubbs Professor of Chemical Engineering and Biological Engineering at the Koch Institute at the Massachusetts Institute of Technology. His research program is focused on protein engineering of biopharmaceutical proteins by directed evolution, and protein pharmacology for immunotherapy of cancer. In 2007 he cofounded Adimab, LLC, a leading antibody discovery company. He is an elected member of the U.S. National Academy of Engineering.