



Michael Elowitz

Michael Elowitz is a Howard Hughes Medical Institute Investigator and Professor of Biology and Biological Engineering, and Applied Physics at Caltech. Dr. Elowitz's laboratory has introduced synthetic biology approaches to build and understand genetic circuits in living cells and tissues. Elowitz developed the Repressilator, an artificial genetic clock that generates gene expression oscillations in individual *E. coli* cells, and since then has continued to design and build synthetic genetic circuits for programming or rewiring cellular functions. His lab showed that gene expression is intrinsically stochastic, or 'noisy', and revealed how this noise functions to enable a variety of cellular functions, from probabilistic differentiation to time-based regulation. Currently, Elowitz's lab is bringing synthetic "build to understand" approaches to the level of multicellular development, focusing on cell-cell communication, epigenetic memory and cell fate control. Elowitz received his PhD from Princeton University, and did a postdoctoral at Rockefeller University. Honors include the HFSP Nakasone Award, MacArthur, Packard and Searle Fellowships, Presidential Early Career Award, BWF CASI Award, Allen Distinguished Investigator Award, and election to EMBO and the American Academy of Arts and Sciences.