Welcome to the Mukherjee Lab

We are proud members of the G.W. Hooper Foundation, located on the 15th floor of the HSW building (HSW 1521 and 1517), Parnassus Campus, UCSF.

We started our lab in Jan 2014. We work at the cross roads of mammalian cell biology and bacterial pathogenesis. Our lab is interested in understanding how bacterial proteins subvert various cellular processes and manipulate them to their own advantage. Understanding the mechanisms of host-pathogen interactions serves two main purposes. First, it provides an understanding of the mechanism of disease and thus leads to the development of better therapeutic approaches. Second, because bacteria disrupt host processes in multiple ways and often target key host proteins, studying these interactions often lead to a deeper understanding of basic mammalian cell-biological processes. Based on our recent discovery, a major focus of our lab is to understand how the host unfolded protein response pathway is manipulated in response to pathogen infection.

Currently, we are using *Legionella pneumophila*, the causative agent of Legionnaires' disease, as a model to understand how bacteria survive the toxic environment of a host cell and create a replicative niche for themselves. *Legionella* is an exceptional cell-biologist. Work done on *Legionella* has already uncovered some amazing aspects of cell-biology including discovery of a new posttranslational modification. Ultimately, we would like to use *Legionella* as a tool to discover new mechanisms and regulators of host processes.

With spectacular views of the bay area from our lab and really friendly neighbors, there is no shortage of inspiration to do great science!