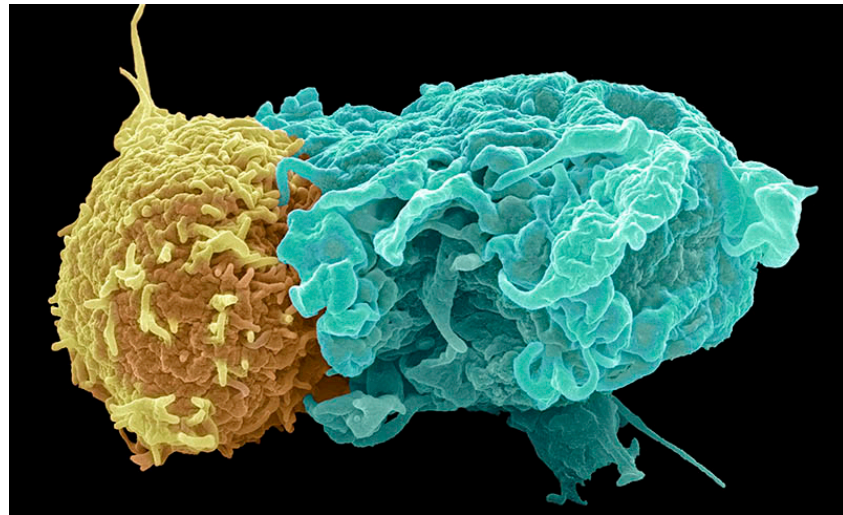




Using Systems Approaches to Study Disease



There is a wide gap between the generation of large-scale biological data sets and more-detailed, mechanistic and structural studies. However, recent work that explicitly combine data from systems and structural biological approaches is having a profound effect on our ability to predict how mutations and small molecules affect atomic-level mechanisms, disrupt systems-level networks and ultimately lead to changes in organismal fitness. Our group aims to create a stronger bridge between these areas primarily using several types of data, including genetic interactions, protein-protein interactions and post-translational modifications. Protein structural information helps to prioritize and functionally understand these large-scale datasets; conversely global, unbiasedly collected datasets helps inform the more mechanistic studies. Our efforts in this respect are focused on model systems as well as in mammalian cells, with a particular focus on cancer, pathogenesis and neurological disorders.

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Director, Quantitative Biosciences Institute, Professor, Cellular and Molecular Pharmacology
University of California San Francisco

Host: Dr. Alan Davidson

Date: Friday December 15th, 2017

Time: 10AM

Place: Room 103, Fitzgerald Building,
150 College Street