

Jagesh V. Shah, Ph.D., is an Associate Professor of Systems Biology at Harvard Medical School and the Renal Division at the Brigham and Women's Hospital. He is a graduate of the Harvard-MIT Health Sciences and Technology Medical Engineering PhD program. An electrical engineering by training, Jagesh's lab is interested in the biochemical pathways that underlie cellular measurement. How cells distinguish signal from noise and how these systems are similar or different than man-made devices. The span of biological questions range from cell-based detection of chemical gradients, mechanobiology and chromosome and DNA stability. One specific translational area is his lab's work on Polycystic Kidney Disease that has developed out of his interest of the primary cilium. His lab is integrating modern microscopic, proteomic and genomic tools to decipher the action of potential therapeutics and understand the underlying pathophysiology of this unmet medical need. His lab is also developing microscopy-based tools to monitor protein-protein and drug-protein interactions in living cells, in an effort to monitor drug action in real-time.