

## Deborah Hung, M.D., Ph.D.

Core member of the Broad Institute  
of MIT and Harvard

Assistant professor at Harvard  
Medical School and Massachusetts  
General Hospital

Physician-scientist Deborah Hung joined the Broad Institute as a core member in 2006. She is combining chemical and genomic approaches to define host-pathogen interactions and to reveal essential *in vivo* gene functions of pathogens that may be potential therapeutic targets for antimicrobial development. By deploying small organic molecules on a genome-wide scale to both perturb and understand bacterial infection, she hopes to identify new therapeutic prospects for a variety of devastating pathogens, including *Vibrio cholerae*, *Pseudomonas aeruginosa* and *Mycobacterium tuberculosis*.

Deborah received her Ph.D. in chemistry from Harvard University, where she worked in Stuart Schreiber's laboratory to characterize the chemical and biological properties of discodermolide, a small molecule isolated from marine sponges that stabilizes microtubules. More recently, she pursued her postdoctoral research in the laboratory of John Mekalanos at Harvard Medical School, using a high-throughput chemical screen to identify a small molecule that inhibits two major virulence factors of *Vibrio cholerae*, a Gram-negative bacterium that causes an acute intestinal diarrhea. When given orally, the inhibitor can protect mice from the effects of *V. cholerae* infection. Although cholera outbreaks are relatively rare in the United States, the disease is epidemic in many non-industrialized countries where water sanitation is poor.

Currently, Deborah holds positions as an infectious disease physician at Brigham and Women's Hospital and Massachusetts General Hospital and an attending critical care physician in the Medical Intensive Care Unit at Brigham and Women's Hospital. She is also an assistant professor in the department of molecular biology at Massachusetts General Hospital and in the department of microbiology and molecular genetics at Harvard Medical School.



Deborah received her A.B. in 1988 from Harvard University, Ph.D. in 1996 from Harvard University and M.D. in 1997 from Harvard Medical School. She completed a residency in internal medicine and fellowships in infectious disease and critical care medicine at Brigham and Women's Hospital and Massachusetts General Hospital.



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