

Stuart K. Kim, Ph.D.

Department of Developmental Biology
Stanford University School of Medicine
Stanford, California 94305-5428
USA

- 1979 B.A. in Chemistry and Philosophy, Dartmouth College, Hanover, NH
- 1984 Ph.D. in Molecular Biology, California Institute of Technology
- 1985–1987 Helen Hay Whitney Postdoctoral Fellowship
- 1989 Post-doctoral, M. I. T. Cambridge, MA
- 1989–1996 Assistant Professor, Department of Developmental Biology, Stanford University, Stanford, CA
- 1996–present Associate Professor, Department of Developmental Biology, Stanford University, Stanford, CA
- Honors**
- 1979–1984 National Research Service Award Traineeship
- 1988–1994 Lucille P. Markey Fellow
- 1990–1994 Searle Scholar

Developmental biology in the post-genome era: worms and chips

We are entering a new age in molecular genetics in which we can use expression data from microarray experiments to dissect cell, developmental and disease pathways more completely and more sensitively than ever before. *Caenorhabditis elegans* is the only animal model system with a complete genome sequence, and thus will have a key role in establishing approaches that make use of the full genome sequence. DNA microarrays could be used to identify genes that are regulated by programmed cell death pathways, specific transcription factors, specific cell-signalling pathways, expression of homologues of human disease genes in transgenic animals or addition of various pharmaceutical drugs. We have produced DNA microarrays that contain approximately 12,000 *C. elegans* genes (60% of the genome), and have nearly completed construction of full-genome microarrays containing over 19,000 genes. We have currently used the 12,000-gene microarrays in over 120 microarray experiments. In one set of experiments, we used a global approach to define 1,432 germline-enriched genes to illuminate the molecular basis for all of the germline-specific functions, including how the germ line remains totipotent and immortal.