

THE DR. PAUL JANSSEN AWARD FOR BIOMEDICAL RESEARCH



VICTOR AMBROS, PH.D.

University of Massachusetts, Medical School

Victor Ambros grew up in Vermont and graduated from MIT in 1975. He did his graduate research (1976-1979) with David Baltimore at MIT studying poliovirus genome structure and replication. He began to study the genetic pathways controlling developmental timing in the nematode *C. elegans* as a postdoc in H. Robert Horvitz's lab at MIT, and continued those studies while on the faculty of Harvard (1984-1992), Dartmouth (1992-2007) and the University of Massachusetts, Medical School (2008-present). In 1993, Ambros and co-workers Rosalind Lee and Rhonda Feinbaum identified the first microRNA (miRNA), the product of the heterochronic gene *lin-4* in *C. elegans*. Following this identification, the labs of Dr. Ambros and Dr. Gary Ruvkun discovered how the miRNA inactivates its target through direct, base-pairing interactions. Currently, the chief research interest of the Ambros lab is understanding the roles of miRNA-mediated regulatory pathways in animal development and human disease.



GARY RUVKUN, PH.D.

Massachusetts General Hospital and Harvard Medical School

Gary Ruvkun was born in Berkeley and attended UC Berkeley as an undergraduate where he studied biology and physics. Dr. Ruvkun obtained his Ph.D. in the lab of Fred Ausubel at Harvard in 1982. Dr. Ruvkun began to work with *C. elegans* as a postdoc with H. Robert Horvitz at MIT and Walter Gilbert at Harvard, where he explored the heterochronic genes that control the temporal dimension of development. This work led to the discovery of the first microRNA (miRNA) genes and their mRNA targets by the Ambros and Ruvkun labs, the discoveries by the Ruvkun lab that the mechanism of miRNA regulation of target mRNAs is post-transcriptional and that some miRNA genes are conserved across animal phylogeny, the computational discovery of hundreds of miRNAs by the Ruvkun lab, and the discovery of a common core miRNA and RNAi mechanism by the Ruvkun and Mello labs. Dr. Ruvkun's lab is now using functional genomic and genetic strategies to systematically discover the components of the RNAi and miRNA pathways in *C. elegans*.