

Victor Ambros and Gary Ruvkun win 2024 Nobel Prize in Physiology or Medicine for discovery of microRNA

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For the discovery of a fundamental principle governing how gene activity is regulated



The Nobel Assembly at Karolinska Institutet has decided to award the 2024 Nobel Prize in Physiology or Medicine jointly to Victor Ambros and Gary Ruvkun for the discovery of microRNA and its role in post-transcriptional gene regulation.

This year's Nobel Prize honours two scientists for their discovery of a fundamental principle governing how gene activity is regulated.

Victor Ambros and Gary Ruvkun were interested in how different cell types develop. They discovered microRNA, a new class of tiny RNA molecules that play a crucial role in gene regulation.

Their groundbreaking discovery revealed a completely new principle of gene regulation that turned out to be essential for multicellular organisms, including humans. It is now known that the human genome codes for over one thousand microRNAs. Their surprising discovery revealed an entirely new dimension to gene regulation. MicroRNAs are proving to be fundamentally important for how organisms develop and function.

Victor Ambros (left in the image) was born in 1953 in Hanover, New Hampshire, USA. He received his PhD from Massachusetts Institute of Technology (MIT), Cambridge, MA, in 1979 where he also did postdoctoral research 1979-1985.

He became a Principal Investigator at Harvard University, Cambridge, MA in 1985. He was Professor at Dartmouth Medical School from 1992-2007 and he is now Silverman Professor of Natural Science at the University of Massachusetts Medical School, Worcester, MA.

Gary Ruvkun (right in the image) was born in Berkeley, California, USA in 1952. He received his PhD from Harvard University in 1982. He was a postdoctoral fellow at Massachusetts Institute of Technology (MIT), Cambridge, MA, 1982-1985. He became a Principal Investigator at Massachusetts General Hospital and Harvard Medical School in 1985, where he is now Professor of Genetics.