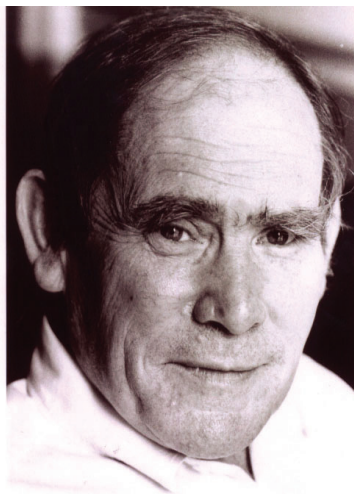


Sydney Brenner Wins 2002 Nobel Prize in Medicine



Adjunct Biology Professor
Sydney Brenner

Sydney Brenner, an adjunct professor of biology at UCSD and distinguished professor at the Salk Institute for Biological Studies, is one of three recipients of the 2002 Nobel Prize in medicine for his contributions toward discoveries about how genes regulate organ growth and the process of programmed cell death.

Brenner showed that the tiny transparent worm *C. elegans* was useful for studying how cells specialize and organs develop. His work “laid the foundation for this year’s prize,” the awards committee said.

During his distinguished career, Brenner also demonstrated that a chemical could produce specific genetic mutations in the worm, allowing different mutations to be linked to specific effects on organ development. The work of Brenner and

this year’s other Nobel laureates in medicine has implications for understanding a range of diseases, including cancer, AIDS, strokes, and neurodegenerative diseases.

“Sydney Brenner has made remarkable contributions throughout his career to our understanding of biology and medicine,” said Dr. Richard Murphy, president and CEO of the Salk Institute. “He was responsible for uncovering the basic principles of how DNA instructs cells to make proteins and he was the first to sequence the genome of an entire organism (the worm *C. elegans*), work that set the stage for understanding the field of cell death, which is critical to our understanding of many diseases, including cancer and degenerative diseases of the brain. His work also provided the foundation for the subsequent sequencing of the human genome. Sydney is a true visionary and one of the most important biologists of our time. He is well deserving of this honor.”

In the early 1960s, Brenner established the existence of messenger RNA, or mRNA, which can be translated into proteins, and demonstrated that the nucleotide sequence of mRNA determines the order of amino acids in proteins. For these discoveries in 1971, Brenner received his first Lasker Award, sometimes referred to as “America’s Nobel,” in Basic Medical Research. He received a second Lasker Award in 2000.

Among his other notable advances, Brenner—with Salk Institute Distinguished Professor Francis Crick—proposed that a single amino acid is coded by three nucleotides, a triplet, of RNA.

At the Salk Institute, which he joined in 2000, Brenner has been studying vertebrate gene and genome evolution, where he developed new ways of analyzing gene sequences, offering new understanding into the evolution of vertebrates.

The Nobel Prize for medicine was formally presented December 10—the anniversary of the death of Alfred Nobel who established the awards—in Stockholm. It carries a cash award of about \$1.1 million, which will be shared equally among the three scientists. Sharing this year’s prize with Brenner are John E. Sulston from the United Kingdom and H. Robert Horvitz from the United States. Horvitz is at the Massachusetts Institute of Technology. Sulston works at the Sanger Center at Cambridge University; he studied at the Salk Institute as a postdoctoral student under Leslie Orgel.

For more information, visit: <http://www.salk.edu/news/releases> and <http://biology.ucsd.edu/faculty/brenner.html>.