materials in the dead cell. Studies showed that the nuc-1 gene was responsible for the degradation of the genetic materials in the dead cell.

He noted that using mammals in his study will also be difficult since the organism is too complex and there is enormous number of cells that must be studied. He wanted to limit his study to a manageable organism and he chose to use the nematode C. Elegans since it is not too complex or too simple. The worm is approximately 1mm long, has a short generation time and is transparent allowing direct viewing of cell division under the microscope. In his studies in the early 1970s, he was able to show that specific gene mutations can be induced in the genome of the worm by using experimental trials. He thought that if he wanted to observe organ development and programmed cell death, it would be a balance between cellular division and cell death to ensure the viability of the species.

In his investigations on C. elegans, he found that ced-4 and ced-3 genes participated in the execution of cellular death. These are the two death genes that he was able to conclude that the cell lineage is invariant. This means that all the worms he observed underwent exactly the same process of cell division and differentiation. He also noted that every cell needs a functional ced-3 and ced-4 to undergo programmed cell death. Moreover, he also showed that ced-9 gene acts as an inhibitor to the execution of programmed cell death or apoptosis. In his investigations on C. elegans, he found that ced-4 and ced-3 genes are the death genes he found in the genome of humans. This entails that the death genes he found in the genome of C. elegans can possible have counterparts in our own genome.

He then decided to pursue medicine and took courses on Anatomy and Physiology. He immediately became addicted with chemistry and collected test tubes and other glassware at home. He then studied at Cambridge with another scholarship. In 1963, he finished his M.A. at the University of Cambridge. Three years after, he finished his Ph.D. in the same university. He then became a professor of Biology in MIT Cambridge and an Investigator in Howard Hughes Medical Institute, MIT. He also received numerous awards like Dreyfus Foundation award, Spenser Award in Neurobiology, U.S. Steel Foundation Award in Molecular Biology and Ciba-Geigy Award for Biomedical Science.

Lastly, these discoveries proved to be very important in the field of medical research and clinical applications. One of the most obvious applications of this discovery is the control of cancer development. The Nobel Prize for Medicine or Physiology of 2002 was awarded to Sydney Brenner, H. Robert Horvitz and John E Sulston. These technologies or drugs can lead to the survival of cells that are normally destined to die. In his investigations on C. elegans, he found that ced-4 and ced-3 genes were responsible for the degradation of the genetic materials in the dead cell.