Worm cast in starring role for...

Erika Check, Washington

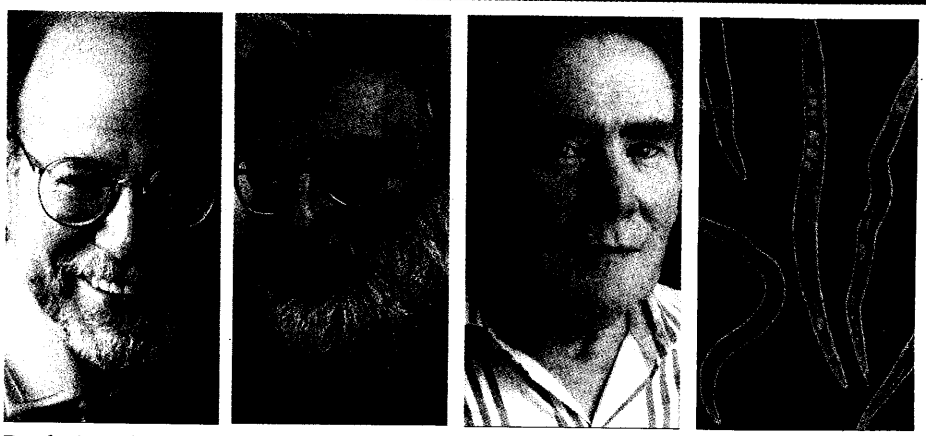
A humble nematode has wormed its way into the affections of the scientific community and helped to secure this year's Nobel Prize in Physiology or Medicine.

The award goes to three biologists whose work on the model organism *Caenorhabditis elegans* has yielded insights and spin-offs in such diverse fields as cancer research and modern genomics.

South African-born molecular biologist Sydney Brenner, president of the Molecular Sciences Institute in Berkeley, California, will share the US$1.1 million prize with John Sulston of the Sanger Institute in Cambridge, UK, and American Robert Horvitz of the Massachusetts Institute of Technology.

"This award is fantastic and well-deserved," says Robert Waterston, director of the Genome Sequencing Center at Washington University in St Louis. "It's not only a tribute to the investigators, but also to the power of the worm."

Brenner started the field of *C. elegans* biology in the 1960s. He had already made a name for himself as a founding father of molecular biology and wanted to concentrate on the development of the nervous system. So he began looking for a model system that was simpler than the familiar fruitfly, but more complex than bacteria. He chose the nematode because of its short life cycle, genetic simplicity and tiny size — less than 1 mm long.



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Developing a theme: (from left) Robert Horvitz, John Sulston and Sydney Brenner have won the 2002 physiology Nobel for their work on the biology of the nematode *Caenorhabditis elegans*.

"We wanted to find a good experimental organism that people could study, and it has proved to be the right one," Brenner says. "What gives me the greatest pleasure is that so many people are working on this system now. When I meet scientists who are my 'great-great-great-grandchildren', it's very satisfying."

Sulston was one of Brenner's earliest students. During the early 1970s, he undertook the 'lineage project', in which he spent hours each day staring through a microscope at dividing *C. elegans* cells. Finally, in 1977, he published a complete map of how one fertilized egg gave rise to the 959 cells of the adult worm (J. E. Sulston and H. R. Horvitz *Dev. Biol.* **56,** 110–156; 1977).

Along the way, Sulston made several crucial observations, including the recognition