

TOP AWARD FOR SCIENTIST WHO DEVELOPED THE FIRST TRANSGENIC PLANT

On 25 April at the Franklin Institute in Philadelphia Mary Dell-Chilton of Syngenta Biotechnology at Research Triangle Park, NC, USA, received the 2002 Benjamin Franklin Medal in Life Science

The Franklin Institute Awards

Widely regarded as the American Nobel Prizes, and among the oldest comprehensive science and technology awards programs in the world, The Franklin Institute Awards have recognized preeminent accomplishment in science and technology since 1824, in the spirit of discovery embodied by Benjamin Franklin. A virtual who's who of 19th and 20th century scientific achievement, the list of venerable honorees includes Albert Einstein, Thomas Edison, Orville Wright, Marie and Pierre Curie, Jacques Cousteau and Stephen Hawking. Indeed, since 1900, 98 Franklin Institute laureates have also been honored with 100 Nobel Prizes (14 in the last 5 years alone), including the 2001 Benjamin Franklin Medal laureate in Chemistry, Dr. K. Barry Sharpless, and the 2000 Benjamin Franklin Medal laureates in Physics, Dr. Eric Cornell, Dr. Wolfgang Ketterle, and Dr. Carl Wieman.

The 2002 Life Science awardee

The recipient of the Life Science award is Mary Dell Chilton who is Distinguished Science Fellow and Principal Scientist II at Syngenta Biotechnology at Research Triangle Park, NC, USA. The citation for the award reads: *For her key discoveries and wide-ranging contributions in the development of the Agrobacterium tumefaciens Ti plasmid as a major vector system for plant genetic engineering.*

Mary-Dell Chilton received her B.S. in Chemistry from the University of Illinois at Urbana in 1960 and her Ph.D. in Chemistry from the University of Illinois at Urbana in 1967. While on faculty at Washington University in the late 1970s and early 1980s, Dr. Chilton showed that the crown-gall tumors of plants are caused by the transfer of a small piece of DNA from a plasmid in the pathogen, *Agrobacterium tumefaciens*, into the host plant, where it becomes part of the plant's genome. This Ti plasmid could furthermore be used to transfer genes between pro- and eucaryotic organisms. In this way Chilton developed the first transgenic plant in 1982.

Her corporate career began in 1983 with Ciba-Geigy Corporation (a legacy company of Syngenta) and has spanned both research and administrative roles, including Vice President, Agricultural Biotechnology. Her research areas include plant genetic engineering, crop improvement, biological control organisms, *Agrobacterium tumefaciens*



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and *Agrobacterium rhizogenes* as gene transfer agents, and vectors for introducing new genes into plants. Another area focuses on chromatin structure and scaffold attachment regions and their effect on transgene expression and stability. Chilton's research has made it possible to grow crops with improved yields, resistance to insects and disease, and the ability to withstand adverse environmental conditions.

Dr. Chilton is author of more than 100 scientific publications. In honor of her many achievements, Syngenta recently announced creation of the Mary-Dell Chilton Center – a new administrative and conference center to be added to the SBI facility in Research Triangle Park.

Dr. Chilton was elected to the National Academy of Science in 1985, and is a member of the American Academy of Arts and Sciences, North Carolina Board of Science and Technology, and a Fellow of the American Academy of Microbiology. She is the recipient of the American Institute of Chemists Bronze Medal, Rank Prize in Nutrition from the UK, University of Illinois' David Gotlieb Medal, and the American Chemical Society's Hendricks Medal.