

CIBA-Geigy Award

Sponsored by the CIBA-Geigy Corporation, this award is given to individual plant pathologists who have made significant recent contributions to the advancement of knowledge of plant diseases or their control. The award consists of a trophy and an expense-paid trip to Basel, Switzerland.

Thomas J. Burr



Thomas James Burr was born in 1949, in Wisconsin. He received the B.S. and M.S. degrees from the University of Arizona in 1971 and 1973, respectively. In 1977 he earned the Ph.D. degree in plant pathology from the University of California at Berkeley. He was assistant professor in the Department of Plant Pathology at the New York State Agricultural Experiment Station, Cornell University, Geneva, New York in 1977, and was promoted to associate professor in 1983.

Dr. Burr's main area of interest is bacterial diseases. His work on blister spot of apple caused by *Pseudomonas syringae* pv. *papulans* ranges from etiology to epidemiology and control. He confirmed identification of the causal agent and determined that infection occurred through stomata of young fruit 2 to 2.5 weeks after petal fall. This discovery led to an effective control recommendation of properly timed streptomycin applications. He developed a selective medium to distinguish *P. syringae* pv. *syringae* from *P. syringae* pv. *papulans* and from other bacteria. This was an important accomplishment since he had previously determined that pv. *syringae*, although present in apple orchards, was not capable of causing blister spot. Through the use of the selective medium, he discovered that *P. syringae* pv. *papulans* resides in the

center of dormant buds as a primary overwintering site and that the pathogen is an epiphyte on the foliage of certain apple cultivars and weeds.

Dr. Burr's work on crown gall caused by *Agrobacterium tumefaciens* is equally significant. He has confirmed the presence of biovar 3 as the main crown gall pathogen of grape and has isolated it from galls, sap, and soil. More significantly, however, he has isolated biovar 3 from symptomless one-year-old grape cane cuttings used for propagation material. These studies demonstrated the systemic nature of the pathogen in grapevines. Dr. Burr has developed indexing methods for detection of *A. tumefaciens* in grape cuttings and is exploring new avenues for control based on the production of clean propagation material with tissue culture.

Several other diseases such as an apple root rot in nurseries caused by *Rhizoctonia solani*, a leaf spot of grape caused by a *Xanthomonas* sp., and apple cankers caused by three fungi, *Nectria cinnabarina*, *Coriolus versicolor*, and *Phyalospora obtusa* have been investigated by Dr. Burr. He is currently studying the etiology of replant diseases of grape and apple, as well as the potential benefit of plant growth-promoting bacteria on apple roots.

Dr. Burr is also responsible for evaluating experimental compounds as fungicides and bactericides for pome and stone fruits. Included in these studies are experiments on rate response and new use strategies which take into consideration various modes of action, such as protection, after-infection, and/or antisporulant activity.