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UW-Milwaukee professor's startup protects crops without increasing antibiotic resistance

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Ching-Hong Yang -- a professor of biological sciences at the [University of Wisconsin-Milwaukee](#) and chief scientific officer of Milwaukee-based, faculty startup T3 BioScience LLC -- has created a compound to fight fire blight disease in fruit trees while minimizing antibiotic resistance.

The product, which protects apple and pear trees from the devastating effects of the *Erwinia amylovora* pathogen, provides an alternative method to control fire blight without using traditional antibiotics. The new compound disarms bacteria by targeting the pathogen's secretion system (T3SS), and its efficacy has proven to be comparable to that of commercialized antibiotics during field testing.




However, unlike conventional antibiotics that have been used to treat this devastating disease, Yang's compounds render pathogens harmless without killing them, thereby eliminating the natural selection pressure that leads to antibiotic resistance. In addition, the product created by Yang and his colleagues has the potential to treat human infections in the future.

Yang is a recipient of the [UWM Research Foundation's Catalyst Grant Program](#), which is supported by Milwaukee's [Lynde and Harry Bradley Foundation](#). The program uses a competitive process to support researchers at UWM whose projects have high potential for commercialization.


Yang's T3 BioScience is working with the UWM Foundation to help take his work from idea to market. After completing its final round of testing this spring, T3 Bioscience hopes to receive approval from the [U.S. Environmental Protection Agency](#) and have a market-ready product available in two to three years.



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